THE

MEDICAL AND SURGICAL REPORTER.

No. 1407.] PHILADELPHIA, FEBRUARY 16, 1884. [Vol. L.—No. 7.

ORIGINAL DEPARTMENT.

COMMUNICATIONS.

PROOF THAT HUMAN MILK CONTAINS ONLY ABOUT ONE PER CENT. OF CASEIN; WITH REMARKS UPON INFANT FEEDING.

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Read before the Philadelphia County Medical Society.

You must give me your indulgence for bringing before you a subject necessarily somewhat dry in its details, but its great importance must be my justification. Nearly two years ago, I had the pleasure of reading here a paper upon "Milk Analysis," when I described the method I had worked out, and briefly detailed my results. The main conclusion was that human milk never contains more than about one per cent. of casein, and this observation I then claimed to be a new one, and very important, as showing how we should feed infants so unfortunate as to be deprived of their natural sustenance. A year or more ago, I delivered a lecture to the class at the Pennsylvania Hospital, which was subsequently published in the *Medical News* of November 4, 1882, in which I described a plan of feeding deduced from the results of numerous experiments and analyses. This evening, I wish, first, to offer proof that the results arrived at by the method of analysis are correct, and, second, to make some suggestions about the proper method of infant feeding.

Although many chemists have made analyses of human milk, and a great variety of divergent results have been attained by different methods, there has as yet been no proof offered of the correctness of any of them. This constitutes an important missing link in any attempt to place the question of the composition of milk upon a settled basis; and if a method of analysis is ever devised that will give results which shall be universally accepted, and stand the test of time, the accuracy and correctness of the method must be susceptible of proof—simple, scientific, and incontrovertible proof. Some proof of the correctness of the analyses described here two years ago will now be attempted.

No one disputes that in ether, chemists have a perfect solvent for fat, which, when properly applied in milk analysis, extracts it all. The fat when separated can be seen, and the eye tells positively that it is fat.

With regard to the water, it is equally certain that by the evaporation process its amount can be accurately estimated. This statement is made with the knowledge that there may be with the water some slight traces of other fluids—alcohol, for instance, and perhaps other volatile liquids; but these must be in such minute quantity that they need not be taken into consideration, and for the present the liquid portion of milk may be spoken of as the water. It is equally certain that in incineration, properly performed, there exists an easy and correct method of determining the amount of inorganic matter. In the future, of course, there may be perfected some way of estimating the salts in milk, by extracting from the liquid milk, or from the solid residue left after evaporation, and this may show them to exist in larger quantity than the present method of incin-

eration leads to believe; but the possible error introduced in this way must be very small, and does not invalidate the general facts stated. That the existing estimates of the water, fat, and inorganic matter are correct, is further proved by the fact that there is no difference of opinion in regard to their amounts. Examination of the analyses of different chemists shows an almost exact uniformity of conclusion with regard to the relative quantities of the above-mentioned substances.

When the estimates of the casein and sugar, however, are considered, the widest divergence of view is discovered in the conclusions as to the amounts existing in human milk. In regard to cows' milk, chemists all arrive at nearly uniform conclusions. The casein in human milk is estimated by Dolan and Wood, in one of their analyses, at 7.005 per cent., Vernois and Becquerel give it as 3.924 per cent., and Henri and Chevallier as 1.52 per cent., while my own experiments lead me to conclude that there is about 1 per cent Now the fact is a striking one, that if in any of these analyses the sugar and casein amounts be added together, the sums are found to be in each instance nearly the same. The subjoined table shows this to be the case.

	Vernois and Becquerel.	Simon . . .	Henri and Chevallier..	Dolan and Wood . . .	Haidlen . .	L'Héritier . .	Doyère . . .	Clemm . . .	Tidy	Meigs	Payen . . .	Quevenne . .	Regnault . .
Casein	3.924	3.43	1.52	7.005	3.1	1.30	.85	3.533	3.533	1.046	.215	1.05	3.9
Sugar	4.364	4.82	6.50	1.921	4.3	7.80	7.31	4.118	4.624	7.407	8.805	7.31	4.9
Total	8.288	8.25	8.02	8.926	7.4	9.10	8.16	7.651	8.157	8.453	9.020	8.36	8.8

The estimates of Haidlen, L'Héritier, Doyère, and Clemm, are taken from a table in the Physiologische Chemie of Gorup-Besanez; those of Vernois and Becquerel, Payen and Regnault, are taken from one in the Traité de Chimie Pathologique par Becquerel et Rodier: but the others are from the original sources. A complete estimate of all the constituents is not attempted in the analysis of Quevenne; and under the head which is called casein in the table is included albumen (matière albumineuse précipitée par l'alcool); under that of sugar are included also extractive matters (lactine et matières extractives).

The table also shows that, in each instance where the casein amount is large, the sugar is small; and *vice versa*—that where the casein amount is small, that of sugar is large.

It has been already said that as regards the analysis of human milk, all observers are agreed as to the proportions of the water, fat, and ash; it is now further evident, from the table, that all agree as to the quantities of casein and sugar taken collectively, and that only when the separation of the two is attempted does there exist any difference of opinion. The separation of the casein from the sugar, therefore, is the difficult part of milk analysis, for in regard to this alone is there any difference of opinion. In this portion of milk analysis, then, is reached the stumbling block; and it alone requires any explanation, for the rest is universally conceded, and cannot, therefore, but be considered as already placed upon a scientifically exact basis.

There are but two possible explanations of the different results arrived at by various investigators; one, that human milk is as variable a substance in regard to the amounts of casein and sugar contained, as the different analyses would lead to believe; and the other, that the methods of the majority of chemists have been faulty and their conclusions incorrect. That the second of these two explanations is the correct one, does not admit of doubt. Wanklyn says that cows' milk is a substance exhibiting great uniformity of composition, and what he says of cows' milk is also probably true of human milk. There is no reason to expect that it would vary so much in regard to the proportions of casein and sugar, when cows' milk exhibits such uniformity of composition in these respects. It may, by analogy, be fairly argued that human milk is very unlikely to be so variable as published analyses would seem to show. The proof of this, however, lies in showing, by examination of a large number of specimens, that human milk always contains a large amount of sugar (say 7 per cent.), and therefore by exclusion it cannot contain the great amount of casein it is usually credited with, for all observers agree as to the sum of the amounts of the two substances.

The existence of this large amount of sugar in human milk I have endeavored to demonstrate by experimenting as to how much could be obtained in the crystalline form from any fixed quantity, and then, by applying the same process to cows' milk, to find out whether an equal or, as should be the case if my already published original an-

alyses are correct, only a less quantity of sugar will take the crystalline form.

An experiment was made as follows: 10 cc. of human milk, which had already, by the process described in my previous paper, been found to contain 7.224 per cent. of sugar, was, as usual, agitated with ether and alcohol, and the fat removed. After the removal of the fat the remaining portion was carefully washed into a dish, and in the water-bath, at a temperature of 70° to 80° C., evaporated until only about 10 cc. of fluid remained; upon this was poured a mixture of 25 cc. of water with 25 cc. of alcohol, and the whole allowed to stand over night. By morning a precipitate had formed and settled to the bottom of the vessel; this was thrown upon a filter and washed with a mixture of equal parts of boiling alcohol and water. The filtrate was again reduced in the water-bath, at a temperature of 70° to 80° C., to about 10 cc., and then 75 cc. of absolute alcohol added. This caused again the formation of a slight precipitate, which was allowed to thoroughly settle to the bottom, when the perfectly clear fluid above was poured off into a dish, care being taken that none of the precipitate passed over with the clear fluid. This liquid was allowed to evaporate, without heat, in an open dish of known weight, and there remained finally only crystalline milk-sugar, with a very minute amount of the inorganic material. The 10 cc. of milk thus treated, yielded 659 milligrammes of sugar dry at 100° C. This milk had been previously ascertained to contain 738 milligrammes of sugar to each 10 cc., which made its percentage of sugar 7.224, as already stated. These figures are sufficiently nearly parallel to prove the point, for by the method of crystallization described, it was not expected that all the sugar present would be obtained in the crystalline form, some of it being necessarily precipitated with the casein in the course of the manipulations with alcohol; but only to obtain it pure, and in sufficient quantity to prove that the sugar existed in the milk in the large quantity shown by the analysis, and therefore necessarily by exclusion, the existence of only the small amount of casein. The demonstration thus obtained seems incontrovertible, for when the existence of the large amount of sugar is shown, it follows as a necessary corollary that there can be only the small amount of casein, and therefore the existence of the small amount of casein in human milk is proved.

As a means of further proving that the sugar obtained by crystallization, as described, was entirely free from any traces of casein, it was tested for me by Mr. J. K. Hecker, the apothecary of the Pennsylvania Hospital, by the Nessler test described by Wanklyn and Chapman (Water Analysis, by J. Alfred Wanklyn and Ernest Theophron Chapman, London, 1876, p. 25). This test decomposes the casein and forms ammonia from the nitrogen. When the crystalline sugar was subjected to its action, it showed it to be practically free from casein.

Cows' milk, when subjected to the same process of precipitation of the casein by alcohol, after the removal of the fat, yielded only about 4 or 5 per cent. of crystalline sugar. The manipulations were not carried out with the care that was taken when human milk was examined, for there is no dispute as to the amount of sugar in cows' milk; the experiment was therefore made merely to afford confirmatory evidence of what was shown by that upon the human milk. For if only a little more than 4 per cent. of sugar existed in human milk, as is claimed by Vernois and Becquerel, and others, and this being the quantity universally conceded to exist in cow's milk, then when both were subjected to the action of the same reagents, the same amount only of crystalline sugar should be yielded. This, however, was not the case.

One of the strongest proofs of the correctness of the estimates of fat in milk is afforded by the fact that after it has been separated, it can be seen, and the eye tells that it is fat. When sugar is crystallized, and can be seen and felt, and examined with the microscope or a magnifying-glass, and the characteristically shaped crystals of milk-sugar are seen, the fact that it is sugar, and nothing else, becomes self-evident.

To test still further the accuracy of the method described in my former paper upon milk analysis, I carefully analyzed a specimen of human milk, and found it contained the different proximate constituents in about the usual quantities. Then I separated from a further portion of the milk, taken at the same time and under exactly parallel circumstances, fresh portions of the casein and sugar, which I gave to Mr. Hecker, to test their purity; the sugar to be subjected to the Nessler test, to discover if it contained any casein, and the casein to be subjected to the action of Fehling's test, to find whether or not it was free from all traces of sugar. The casein entirely failed to produce any effect upon the copper solution, thus showing that it was free from sugar, while if a small portion of the sugar was added to the solution, the characteristic reduction of the

copper at once took place. When the sugar was subjected to the Nessler test, .05 grammes being introduced into the retort when the decomposing materials were ready, it almost entirely failed to react, showing no more change than would be accounted for by the distilled water which had been used to prepare the sugar. This distilled water must have contained traces of organic matter, for when it was subjected to the test, it showed slight traces of ammonia. The test is so delicate, that it is only by the greatest care and nicety in preparing the materials that they can be had perfectly free from all nitrogenized materials. The conclusion was that the sugars—both that prepared by the ordinary process advised for analytic purposes, and that obtained by crystallization—were, practically speaking, free from casein.

If, then, it has been shown that human milk contains approximately 87.1 per cent. of water, 4.2 per cent. of fat, 7.4 per cent. of sugar and 0.1 per cent. of inorganic matter, the proof that it contains, not 3 or 4 per cent. of casein, as is commonly taught, but only about 1 per cent., is complete.

It may seem bold to make statements directly contradictory of the correctness of many of the usually accepted standards, but it is done with the full knowledge that it is liable to contradiction. There is an article on "Infant Foods," by Prof. Albert R. Leeds, in the *Transactions of the College of Physicians*, third series, vol. vi., Philadelphia, 1883, in which he gives results quite different from my own; but as he gives no account of the methods he pursued, any criticism of his results is at the present time impossible.

In the endeavor to find a food which shall be the best for infants who have to be hand-fed, there are two considerations, either of which might be selected as the basis from which to start. In the first place, the desired goal might be attained by making trial of all sorts of foods; and these being put to the test of experience, the good would be retained and the bad gradually weeded out, until at last perhaps the most suitable would be found, and slowly introduced. On the other hand, the desired end might be attained by trying to produce a food which should be, as nearly as possible, like what nature has provided for the infant. Many trials have been made in the past by both these methods, but to the second one justice has never been done; for, if my conclusions are correct, a proper understanding of the composition of human milk, from which to start, has been wanting.

A clear understanding being now had of its proximate constituents, and the proportions in which they exist, it is possible more intelligently to set about finding how the same elements may be had, and mixed together to make an artificial food like human milk. Cow's milk is almost universally the basis of the foods used, in this country at least.

The artificial food which I shall presently recommend is the outcome of a study of the subject from both of the standpoints suggested, and its advantages are demonstrable. Upon theoretical grounds, it is what a food for infants should be; for analysis of human milk and cows' milk has shown what is their composition, and in the artificial food the elements have been introduced in the same proportions as they exist in human milk. Experience has for many years past been tending in the direction of proving such a food to be what is needed; for, while almost innumerable manufactured infant foods of every variety have been introduced, and have often for a time been thought all that could be desired, they have all, one after another, fallen into disuse and been forgotten; but the use of cows' milk continues to hold its own, and in civilized countries is employed ten times more than all the manufactured foods together. The question, however, remains of how to use it, and the various methods suggested have been almost as numerous as the physicians who have advised them. For a long time the great majority of writers upon infant diseases and diet have recommended that cows' milk should be diluted before giving it to young infants; and this, they all agree, is because it contains too much casein, which causes a curd that only infants of the strongest digestion can with safety assimilate.

The weight of testimony that cows' milk contains much more casein than human milk, is so great that it is astonishing how almost universally the analyses of human milk of Vernois and Becquerel, and of those who have arrived at like conclusions, have been accepted and given credence, despite the fact that the evidence of the senses of every one who has examined into the matter is diametrically opposed to such an acceptance. Although, as already said, the weight of authority has long been in favor of the use of diluted milk, still there have always been those who recommended it to be used pure. Of later years more and more has been said and written upon the advantages to be derived from the use of cream, or diluted cream. Dr. J. Forsyth Meigs, who was a well-known authority upon the com-

plaints of children, for years used with great success a mixture of equal parts of milk, cream, lime-water, and a weak arrowroot-water, with a little sugar. Cream mixed with whey, to increase the sugar and lessen the amount of casein, has been recommended. Biedert (Virchow's Archiv, Band 60, 1874,) has written an article, and concludes that the best food is cream and water, one part to four, with fifteen grammes of milk-sugar to the half litre of the mixture, the strength of this to be gradually increased. Biedert made many experiments comparing the relative coagulability of human and cows' milk, and again the digestibility of the coagulum; as can therefore be presupposed, his experiments turned mainly upon the two kinds of casein and their differences. He concludes that "there are two important points in which human and cows' milk are unlike: first, in the different amounts of casein contained; and second, in the absolute chemical differences of the two sorts of casein. The first of these considerations would be of but little importance, however, if the analyses which place the average of casein in human milk at four per cent. are correct; its importance, on the other hand, would be very great if it usually contains—as I, in agreement with Vierordt's view, believe—only from two to two and one-half per cent. I think many further analyses are necessary to establish absolutely this point. Even if this view is accepted, however, dilution of cows' milk with equal or more parts of water is not sufficient to remove the differences. It is well known that such a dilution does not remove all the disadvantages which arise in the use of cows' milk, and my clinical experience has taught me that even dilution with two parts of water does not attain the desired end; and the explanation of this positive irremovable difference is to be found in the important chemical differences which exist, the casein of cows' milk coagulating so much more easily, and the coagulum being so much more firm than is the case with the casein of human milk; and, on the other hand, the coagulum being so much more difficult of solution or digestion.

"Until we succeed in actually making the casein of cows' milk identical with that of human milk, it will be necessary to give infants only so much of it as they can digest (no matter how great the necessary dilution may be), and to make up to them with carbo-hydrates (fat and milk-sugar), the lack of albuminates in the food." He further says: "After numerous experiments, I have come to the conclusion that the amount of cow casein which an infant's food should contain is one per cent. The fat and sugar in cows' milk appear to be as easily digested, and in no wise different from those contained in human milk. If, therefore, one-eighth of a litre of sweet cream (which, according to Hoppe, contains nine and one-half per cent. of fat, three per cent. of sugar, and four per cent. of casein) is diluted with three-eighths of a litre of water, which has been previously boiled, and milk-sugar is added in the proportion of fifteen grammes to the half litre, the desired cream mixture is produced, and contains one per cent. of casein, 2.4 per cent. of fat, and 3.6 per cent. of milk-sugar, which will be found, under all circumstances, to be well borne, and is a sufficiently nourishing food." The greatest part of Biedert's admirable article consists of a detail of experiments made of treating cows' and human milk, and the caseins obtained from both sorts, with a variety of reagents, and observing the different relative effects produced. His conclusion is that "the pure casein of human milk is, in both its physical and chemical nature, different from that of cows' milk." The casein of cows' milk, when isolated, has always an acid reaction; while, on the contrary, that obtained from human milk is always alkaline. If human casein is treated in a certain way with acid, there is produced an "acid modification of human casein," which has many points of resemblance with ordinary cow casein; on the other hand, by treating cow casein with alkali, a substance is produced which shows, with many reagents, identically the same changes that are, by like treatment, produced in human milk. After careful examination of these two substances, however, Biedert concludes that "cow casein treated with alkali is, in many respects, much more like human casein than the original cow casein, yet it always shows unmistakable differences." Although he makes a strong case, and there are many reasons in favor of accepting his conclusions, yet, in the present state of knowledge of casein, the difference cannot be considered as absolutely demonstrated.

(*To be continued.*)

A CASE OF FRACTURE OF FEMUR, WITH EXCESSIVE LACERATION OF THIGH, TREATED SUCCESSFULLY, WITH POSSIBLY SOME NOVEL FEATURES.

BY GEORGE W. JOHNSON, M. D.

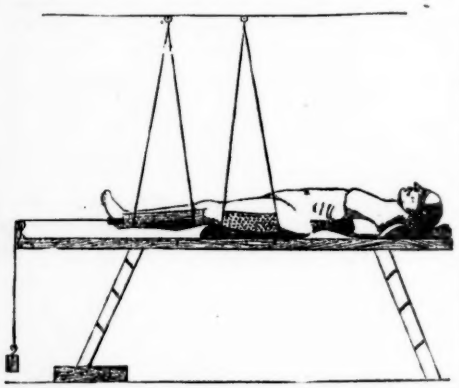
Of Savanna, Ills.

Acting as surgeon of the C. M. and St. P. R. R., I was called November 3, 1883, to attend a case of

railroad injury, in the person of Edward P., a robust man about 25 years of age,

I learned the following particulars of the accident. On attempting to make a coupling, his foot was caught by the guard-rail, and he was thrown in such a manner that the left thigh lay across the track, about its middle; a signal being quickly given, the engineer reversed the engine, which brought the train, which was backing and moving slowly, to so sudden a stop that but one wheel passed over the leg, but the reversal suddenly jerked the wheel back again over the limb at about the same place.

When seen immediately after the accident, the man was suffering severely from shock. On examination of the leg, I found a laceration of the integuments on the outer and back part of the



thigh, commencing at a point a little below and to the outer side of the knee, and extending the entire length of the thigh, ending at the subgluteal crease, the upper two-thirds of the rent being directly posterior.

The laceration extended through the integuments and cellular tissue, and at about the middle of the thigh, the superficial flexor muscles were torn entirely across, their ends hanging from the wound.

The femur was fractured, with some comminution at about the junction of the lower with the middle third; leg everted, and two inches of shortening.

The skin on the anterior aspect of the thigh, bore two broad marks as of intense compression, though but slight breaking of the skin had occurred. A tear was also found extending from just in front of the anus, up the side of the scrotum, nearly to Poupart's ligament.

That more extensive lacerations of the limb had not taken place, seemed owing to the fact that the man was very heavily clad in strong outer and under-clothing, and to the slow motion of the car.

Under an anæsthetic, I made careful examination; the man begging me previously to spare him his leg, even at an increase of risk to his life.

On introducing my fingers into the wound, I sought for the communication with the fractured bone, which I felt sure existed, but I could detect none.

Circulation being good in the lower leg, and sensibility fair, I determined to make an attempt to save the member, even if in a very imperfect condition.

The external wound, which was gaping widely, was closed with sutures, the leg was placed in a straight position upon pillows, and carbolated water dressings applied. Considerable traumatic fever was present during the first few days, and much swelling, especially at the knee.

The water-dressings were continued for ten days, the patient being rolled upon his side for their application, and the leg supported by assistants; but although conducted with the utmost care, at each dressing quite a considerable amount of displacement occurred at the seat of fracture.

To arrange some fixed apparatus for the fracture, which at the same time would permit the attention demanded by the wound, now became a necessity.

After the sutures and some sloughs had separated, leaving the wound clean, I applied extension by adhesive straps, weight, and pulley. Counter extension being secured by the weight of the body, the foot of the bed being raised six inches, Ahl's posterior tibial splint was applied to the lower leg, swinging the same by cords to pulley in the ceiling. I now made a posterior thigh-splint of *sheet zinc*, long and wide enough to embrace the entire back of the thigh, perforated with holes about one-eighth inch in diameter as thickly as was consistent with strength, laid a covering of carbolized gauze over internal surface, and applied the splint thus prepared to the thigh; the raw surface lying directly upon the zinc, only covered by the gauze. Two wire bails were now put across over the thigh, attached to the splint on either side; to these I attached a cord which passed over a pulley in the ceiling. I now, by tightening both my suspending cords, could elevate the entire leg free from the bed, and lower at pleasure, the leg being still kept in line without removal of the extension, as the pulley was some two feet removed from the foot, thus allowing considerable latitude of motion.

The daily dressing consisted of a pillow of absorbent cotton, covered with carbolized gauze, placed under the metallic splint, and receiving the drainage which passed freely through the perforations, the guaze-lining of the splint serving to prevent the protrusion of fungus granulations.

After dressing, the leg was lowered nearly, but not quite, to the bed, the Ahl thigh-pieces were applied to the sides and front of the thigh; a long outside splint reaching to the axilla and below the foot, with a wooden pin at the edge of the lower end passing through a bar fastened across the foot of the bed, was now bound fast to the leg at ankle, knee, upper part of thigh, and by body band, serving to keep all firm and immovable.

For extension weight I at no time used over eight pounds, the weight required probably being less on account of section of some of the muscles.

Some sloughing of the skin on front of thigh took place, but wound soon healed, as did also the wound along the perineum.

My daily routine now consisted of loosening the long splint, laying it aside, raising the leg with the aid of an assistant sufficiently high to allow of the removal of the soiled pillow, and the substitution of a fresh one, lower, and reapply the long splint.

The result has exceeded my most sanguine expectations; the zinc proved soothing to the wound, the discharge, profuse at first, gradually lessened, and at the end of the sixth week after the application of the splint, bony union was found to have taken place, and after waiting for additional security two weeks longer, the apparatus was removed, the wound examined and found healthy, fully one-half its length being healed, and healthy granulations, even with the surrounding skin, covering the remainder, with the process of cicatrization progressing rapidly. Two weeks have now elapsed since removal of the splints, and the wound, which is dressed with oxide of zinc ointment, is healing slowly, but kindly. The patient is now able to sit up in a chair, and begin the use of crutches.

On the most careful measurement, no shortening can be detected.

The bed used was improvised from a canvas-covered cot, a trap being cut; and a cushioned cross-board below, with loose hinges at one end, and hooks at the other, served to close the opening when not in use.

I am aware that our best authors advise amputation in cases of this kind, and it may have been a very dangerous experiment to make; but as the case has progressed so happily thus far toward a cure, and believing the use of the *zinc splint in direct contact with the large wound* is somewhat novel, I will submit the report of the case for what it is worth.

ODONTO-PERIOSTEAL TUMOR SIMULATING PULP—FUNGOID.

BY JOHN S. SMITH, D. D. S.,
Of Lancaster, Pa.

Miss K., a lady aged 21 years, presented herself for treatment October 12, 1883.

She had long suffered from neuralgia, confined principally to the right side of the face, and particularly along the course of the inferior maxillary nerve.

Examination revealed caries of the teeth. Several had died, and there were suppurating pulps in others which were exposed and congested.

When making the examination, my attention was arrested by seeing a tumor the size of a large bean, which completetely filled a carious cavity of the first permanent molar tooth on the lower jaw. The crown of the tooth was broken in places nearly to the line of the gum, and the tumor overlapped the rough edges. This caused the growth to present an angry and inflamed appearance. There was considerable pain when pressure was made to the alveolar process corresponding to the tooth.

The growth was over three years old. It had not been troublesome until within the past year, during which time it had steadily grown worse, and this, and the painful condition of her other teeth already mentioned, drove the lady to seek surgical aid.

Diagnosis.—What is this growth? To all appearance it looks not unlike the pulp-fungus which has its origin in the bulbous portion of the tooth-pulp, and could be readily mistaken for a fungus of that expression. In the latter condition the removal of the tooth would be alone sufficient for a cure. The removal of the tooth would also remove the tumor.

We find by a careful examination with a probe that the fangs of the molar have been suppurated, and that the probe passes through into the alveoli; in fact, the fangs seem to be imbedded in the stroma. The fangs are loose, and portions of the alveolar process have been absorbed, so that the probe can readily be passed through it.

That the tumor is an outgrowth of that aspect of the odonto-alveolar membrane which adjoins the bone, is beyond doubt. The growth has passed through an opening between the roots of the tooth, making its appearance as above described.

We will therefore exclude pulp-fungus, which has its origin within the stroma of the dental pulp, which condition is perfectly innocent and benign in its nature.

The tumor was a form of epulide simulating, as location is concerned, the pulp-fungus, but a portion of the jaw was found implicated. It had involved it. In this case the simple removal of the tooth would not effect a cure.

Treatment.—The patient was placed in a Morrison dental chair, in a recumbent position, and etherized, Dr. D. R. Summy and Martin H. Musser assisting. The fangs were quickly removed. The engine burs were then made to complete the operation by cutting down that portion of the alveolus and bone involved; the gums were not cut away by the operation, but left intact on the outer and inner borders, this being preferable to removal, as it is a means of retaining the after dressing when found necessary. The hemorrhage was easily controlled with phenol sodique and tannic acid on cotton packed into the cavity.

In two weeks the wound was nicely granulated, and there has been no return of the tumor.

The other diseased teeth were subsequently treated and properly filled, and the neuralgic pains have entirely disappeared.

Hospital Reports.

A CLINICAL LECTURE DELIVERED AT THE PHILADELPHIA HOSPITAL.

BY WILLIAM PEPPER, M. D., LL. D.,

One of the Physicians to the Hospital, and Professor of Clinical Medicine in the University of Pennsylvania.

Reported by WILLIAM H. MORRISON, M. D.

The Treatment of Epilepsy—Lecture 2.

GENTLEMEN: You will remember that at the last lecture (see page 41) I brought before you two cases illustrating the graver forms of epilepsy, one coming on early in life, the other not making its appearance until adult age. In connection with these cases, I alluded to the following causal conditions, injuries to the head, a very frequent factor, and one the exact significance of which requires careful study to determine in individual cases. Heredity and the constitutional and spontaneous character of the disease is opposed to the secondary or organic character, a factor of greatest possible importance, both in treatment and prognosis; and the existence of peripheral irritation in any spot, a subject which requires close study in every case in order that we may avoid overlooking any such cause of reflex disturbance. I alluded particularly to lesions of the genitals, and especially to adherent prepuce and deranged conditions of the gastro-intestinal canal, not only from worms and foreign matters, but also from slight chronic irritation of the mucous membrane.

Of course, in studying epilepsy, we separate epilepsy proper from those cases of epileptiform convulsions resulting from some serious lesion of the nerve centres, and leave entirely out of consideration these latter cases where there is some lesion of the brain, and recognize in epilepsy the expression of a tendency on the part of the nervous system to pass into a convulsive state from depressing or disturbing causes of a more or less powerful character.

I dwelt upon the extreme importance of hygiene and suitable regimen in these cases, and I wish to speak a little further in regard to the influence of diet in cases of epilepsy, for it is one of the fundamental features of the scientific treatment of this disease. I know no disease in which it is more essential to pay attention to this point than it is in this; and it is the more important, because epileptics are, as a rule, voracious, hurried and careless eaters, often having morbid desires, and usually difficult to control. On the one hand, we have a disease which is undoubtedly attended with depression of the nervous system; and on the other hand, one in which a nourishing diet, consisting of such articles as minister to nerve force, is required. Fats and nitrogenous food are indicated, but it must always be remembered that the nervous system is so sensitive that the least peripheral irritation, and especially, I think, irritation of the stomach and intestines, will excite convulsions, or increase the tendency to them. The arrangement of the diet so that it will not, on the one hand, be too restricted and debilitating, and on the other hand, that it will not irritate the stomach, will require careful study of the individual case, and a thoughtful adaptation of the diet to the patient's means. This is further complicated by the fact that many of these patients are uncontrollable, and it will often be found exceedingly difficult to get them to adopt and follow out any special line of treatment.

In some cases in which the irritation of the stomach and bowels is manifestly very great, you will find remarkable results follow from placing the patient on a really rigidly restricted diet. I have had under my observation for several years, a young man who had evidently overworked himself at his trade and had become an epileptic. Many members of his family had exhibited nervous phenomena of various kinds. This young man was delicate, and after he had worked at his trade (plumbing) for some time—working long hours in a cellar without sunlight—he began to have spinal tenderness, and then vomiting occurred frequently after eating. He was at this time eighteen years of age. He grew anæmic, his work became laborious to him, and he then began to have convulsive seizures, which were quite severe and were frequently repeated. There had been no history of epilepsy in this family, although his father is neurotic, and one brother has marked nervous irritability, and also incipient phthisis. This patient also suffered from gastro-intestinal catarrh, and he was put to bed, his diet restricted to milk, and minute doses of nitrate of silver and belladonna administered. This treatment was used simply with the view of im-

proving the gastric symptoms, and not with any expectation that it would influence the convulsions; and yet these convulsive seizures, which had lasted for two years, and which I had treated with a number of remedies without decidedly improving them, gradually grew less frequent, and in a few weeks stopped entirely. The treatment which I have mentioned was then kept up for a number of months, and the result was a perfect cure. This occurred four or five years ago. The young man occasionally suffers from indigestion; he then goes to bed and limits himself to milk, and in a few days he is well again. This case illustrates what can sometimes be obtained from a restricted diet, combined with rest where there is distinctive evidence of gastro-intestinal irritation, and which, combined with an exaggerated nervous irritability, plays an important part in the causation of the convulsions. But I would not pretend to recommend any exclusive system of diet or invariable restriction of the patient. One would err greatly by insisting on too much restriction. I, however, dwell upon this because there are some cases, and you will recognize them by careful study, where this is an essential part of the treatment, and to impress upon you the fact that in all cases, this is an important part of the treatment. This is further shown by the fact that patients will nearly always become worse when you allow their digestion to become disturbed, and that after some error in diet they will have an outbreak of convulsions, and that after being placed on a restricted diet, they will soon settle down to their natural condition. I think, therefore, that we may say that there is no successful treatment of epilepsy without careful attention to the diet, and that in a limited number of cases a cure can be effected by prolonged rest and an absolutely restricted diet. This need not always be a milk diet. There are other forms of diet which are applicable to special cases.

In passing, let me refer to one of these methods, which has attracted considerable attention by the success which has followed its use in the hands of its introducer, Dr. Salisbury. I refer to the diet of raw meat, or meat almost raw, and hot water, with an exclusion of all the oleaginous and starchy ingredients of the food. This is, of course, especially adapted for that type of dyspepsia in which the salivary and pancreatic juices are deficient, and there is a large number of dyspeptics who present this characteristic. The raw meat diet, even if the meat be selected with equal care, has certain disadvantages, among which the risk of infection with tape-worm is by no means the smallest one. But by rapidly broiling the meat and raising it for a moment to a high temperature, so that the activity of any ovum contained in it would be destroyed, or by the use of such care in the selection of the meat that there would be no risk of infection, the raw meat treatment of chronic disease deserves careful attention, and will produce remarkable results in a good many cases. Dr. Salisbury recommends that the meat be prepared by the American Meat and Vegetable Chopper, by which the meat is finely minced, and after twenty or thirty minutes' chopping, there is found on the surface of the meat in the tin cylinder connected with the machine, a red pulp, reduced almost to a powder, and beneath this is a layer of reddish-gray fibre which is almost entirely indigestible. In preparing the "Salisbury steak," this red pulp is formed into pats, put into a wire broiler and broiled for four or five minutes before a hot fire. Prepared in this way, the meat requires very little mastication; and through its use, remarkable alterative effects can certainly be produced upon the system, which is the object to be attained by the use of restricted diets. Perhaps this is sufficient to explain to you the enormous importance which I attach to this element in the treatment of epilepsy.

When I saw you last I referred to the importance of rest in the treatment of this disease. There is, in all these cases, a tendency to nervous prostration, and this peculiarity in epileptic cases is not always sufficiently recognized. We are too much in the habit of regarding epilepsy as a disease subject to fluctuations which have no reference to external causes; but a careful study of the effect of diet will convince you that epilepsy is extremely susceptible to external influences, that it can be made better or worse by momentary occurrences, and that the patient's attention or inattention to a careful regulation of his diet, to proper habits of life and modes of exercise, has much to do with the rarity or frequency, and the mildness or severity of the attacks. Attention to this point has shown me that many epileptics, as long as they avoid over-fatigue or over-excitement, will have none or only few and slight spells, but that over-exertion just as over-excitement is sure to be followed by an outbreak of one or more convulsions. The effect of excitement upon epileptic seizures has long been recognized. I have patients under observation now whose histories I have known for many years, and in some longer than my own life, in whom convulsions occur only at moments of extreme excitement. I have one, a man of the highest intellectual ability, who will go for three or four years without a spell, but if he allows himself to be overwrought, will have a series of attacks lasting perhaps for twenty-four hours. After resting for a week he is able to return to his work, and enjoys complete immunity for several years. History is full of instances of men of remarkable intellectual vigor and emotional power, who at times of excessive exertion or excitement became epileptic. From these marked examples of the effects of excitement down to what we see in the ordinary epileptic, there is every gradation of susceptibility to such causes. This is even more marked in the milder forms of the disease.

There is a class of cases to which the name petit mal has been given, which I allude to here partly on account of their diagnostic importance, and partly because they so well illustrate what I have just now been saying. These cases are extremely common. The patient never has a full convulsive seizure, but at more or less frequent intervals he will have attacks of transient unconsciousness. These attacks may be often repeated, even several in a day, or they may come at long intervals. They frequently occur at night. These spells are just as truly epileptic as are those attended with severe convulsive movements. nor is it a very favorable form, often proving extremely obstinate and rebellious to treatment; not rarely it passes into the fully developed form of

greater epilepsy, and even when it does not do so, this form of epilepsy is often followed by grave effects upon the mind and character of the patient. It is therefore a form of epilepsy of the gravest significance and of the greatest importance. Petit mal assumes different forms, sometimes so slight that it is not recognized for years. Parents will often say that their child has had holding-breath or gasping spells for a long time. These are attributed to some trifling cause, and the fact that they are the evidences of one variety of epilepsy is not recognized. They are sometimes so slight that it is not surprising that they escape detection. It may simply be an instantaneous pause and then a resumption of what is being said or done, without the patient being aware of the interruption. I have under observation a large number of these cases who are liable to these spells, and it is distinctly my opinion that the attacks are increased, and sometimes actually induced, by exertion, fatigue, or excitement; and not rarely have I found patients, more particularly women who never had these spells except when greatly fatigued. For instance after menstruation, when the system is especially sensitive, exertion will be followed for a day or two by these seizures. By recognizing this element of nervous exhaustion, and carefully guarding against such exhaustion, I have repeatedly seen this type of epilepsy slowly decline and entirely pass away.

I am now treating a lad of ten years, the son of highly neurotic parents, who suffers from these slight attacks, which he describes as feelings. He is an extremely bright lad, and stands at the head of his class at school. He is conscious of a little aura, beginning behind the sternum. The boy has been under treatment some four or five years, but neither diet nor therapeutic measures have controlled the attacks. A short time ago, I took the boy from school and ordered him to stay in bed until eleven o'clock in the morning, when he gets up and walks about or plays for a couple of hours. He returns, lies down, and takes his dinner in bed. An hour or two after dinner, he again rises and exercises for a couple of hours, and then goes to bed. His diet is carefully restricted. He is taking cod liver oil with lactophosphate of iron, but no bromides or other remedy to check the attacks. Yet under this treatment decided improvement is for the first time reported. The boy says that the spells are only half feelings now, that he does not lose himself. His mother states that she has not seen any, even transient, unconsciousness for a number of days. Previous to this he would have at least three attacks a day. If the improvement continues, I shall keep up this limited rest. If it does not, I shall make the rest absolute, keeping him in bed for a number of months. But here, both in children and in adults, comes the difficulty of restraining these patients, and this is far worse in adults than in children. After the disease has lasted a little while, there is a marked effect on the temper, and often on the intellect of the patient.

I wish to show you now a little child who presents the saddest form of this disease. He is eleven years old, and has been in the institution for four years. We have, for want of a better place, sent him to the insane asylum. The history is that he was in perfect health until three years old, when he fell down stairs, receiving a severe injury to the head. From that time to the present he has been subject to epileptic attacks, mostly of the milder form, although he sometimes has severe seizures with violent convulsions, and foaming at the mouth. His intellect soon became impaired, and this was followed by a total disappearance of the power of speech, which he had in a good degree at the time of the injury, so that he is now absolutely aphasic. When placed under treatment with bromide of potassium and sodium, he improves—that is to say, the attacks are less frequent. Some other remedies, such as hydrobromic acid, produce no effect, or make the attacks worse. It seems necessary to keep him on the use of bromides. He seems to possess little more than brute instinct. He requires constant care, and unless carefully watched, will carry the most filthy articles to his mouth. If we had seen this child seven or eight years ago, soon after the fall, it would have brought up the questions in regard to operative measures which I considered at the last lecture. Whether the injury was the sole cause of the epileptic attacks, or whether the child had an epileptic tendency which was simply called into life by the injury, we can not now say, for our knowledge of his previous history is very slight. A careful examination of the skull shows no sign of old depressed fracture, and we have nothing to guide us to the seat of the lesion; nor do I think that at this period after the injury, and in the absence of paralysis, or anything else to indicate the seat of the lesion, it is proper to interfere in any operative manner. The brain has been arrested in its development, and is certainly organically affected by the injury.

Such cases as this make us almost wish that in some painless way we had the power to take human life; for this child living, as he may do, to be an old man, will always be dependent on public charity for his care. In thousands of families there are such children scrupulously hidden from all knowledge of the public, acting as a drag upon the entire family circle, by the sadness of the symptoms and the incessant watching, and the painful incidents that are connected with the progress of such cases. From such cases as these you can readily understand of what great importance is the course of action which you decide upon when called to treat this disease in its incipient stage.

I shall now refer to the drugs which are to be used in the treatment of epilepsy. All the drugs known to man have been used in this disease, and of very few of them can it be said that they are innocent: most of them are injurious. Some of them are used simply for temporary purposes, for the improvement of the digestive functions, for the regulation of digestion, for overcoming constipation, and the like—though, as a rule, I think the less we use drugs for these puposes, and the more we depend upon regimen and diet, the better it will be. In certain cases, nutrients and tonics are necessary, and you will often find iron, cod-liver oil, preparations of the phosphates and hypophosphites called for to remedy the condition of malnutrition. Where positive indications for the use of these drugs are not present, their administration is, of course, undesirable. They

should not be given from any theoretical view, but given in the same conditions as call for their use in other diseases.

In addition, there are certain drugs given with the view of controlling the occurrence of the spasms. Until the discovery of the great anti-convulsive powers of the bromides, all forms of anti-spasmodics and anodynes had been used for this purpose, and of them, it may be truly said that nearly all of them were injurious far more than beneficial. There are cases in which these drugs are to be used to fulfil special indications. Certain remedies directed to the nervous system, as the oxide and valerianate of zinc and preparations of silver, notably the nitrate, have well established cures to their credit. There is a wide-spread impression among the populace that nitrate of silver cures fits. Many of those suffering from argyria are people who, suffering from epilepsy, have gotten hold of a prescription containing nitrate of silver, and have on their own responsibility continued its use for a long time. It is not an easy thing to produce argyria, and it requires a good deal of nitrate of silver to do it; but if a person takes half a grain of the drug, three times a day, for from eight to twenty-four months, intense discoloration of the skin will be produced. Nitrate of silver has undoubtedly cured a certain number of cases of epilepsy. When we reflect upon its mode of action, it is difficult to think that its good effect is due to a direct influence upon the nervous system. The cures effected by nitrate of silver seem to have been in cases in which a marked tendency to epilepsy has been associated with disturbance of the gastro-intestinal canal, which has served as a source of peripheral irritation, and this cause of the convulsions having been removed, the patient has recovered. In such a case, its effect is not due to a direct influence upon the nervous system, but to its well-known alterative action upon the surfaces with which it comes in contact. This is another illustration of the importance of attending to peripheral conditions. I presume that arsenic, in the same way, by its alterative and stimulant action, in removing anæmia or some malarial condition, or some trouble of the abdominal organs, has taken away the cause predisposing to the convulsion.

As you know, there is a class of anti-convulsive remedies which contain nitro-glycerine, nitrite of amyl, and all the bromide series, of which the bromides are the most valuable. Their discovery has greatly modified the treatment of epilepsy, and has enabled us to control symptoms in nearly all cases, and to effect a cure in a certain proportion of cases otherwise totally hopeless. Few more valuable additions have been made to the pharmacopœia than is this class of remedies. A vast deal of damage has been done by the reckless and excessive use of the bromides, but great good has been done by a proper and judicious use of these remedies. There are certain plain rules which can be laid down in regard to the use of bromides in epilepsy.

The bromides should at first be given in small doses, and only one of the bromides be given, I do not care which one. After studying the effect of this, larger doses may be given, a combination of bromides or another bromide substituted for the first one given, if the effect is not satisfactory.

The evidences of bromism must be carefully watched, for not only should you look for acne, but also for evidences of mental weakness and nervous depression, which are among the worst results of the constitutional action of these drugs. When these symptoms are produced, the bromides are doing more harm than good, even if they control the attacks. The use of large doses of bromides under these circumstances may produce secondary trouble more serious than the original disease. Nor should the use of bromides be permitted to become too habitual. Of course, some exceptions to this rule have to be made. There are persons who are perfectly well while using the bromides, but who, on stopping them, begin to have convulsions. The spells may be held absolutely in check by doses of from ten to fifteen grains of bromide of potassium or sodium three times a day, although they continue this dose for years. These are instances of the best results of these drugs. In the average case, the result is not so good. While a full dose is taken, the patient is better, but still continues to have a few attacks. Under these circumstances it is better to interrupt the use of bromide for a time, and either substitute some other anti-spasmodic, or allow the patient to go without any drug for a time, than to keep it up constantly and increase the dose as the patient becomes habituated to it.

You will find the details as to administration in your books. Acne can often be prevented by associating a little arsenic with the bromide. The great underlying principles are that the bromides should be used at first in small doses, which may be cautiously increased; that where they are continued for some time, changes should be made in the mode of administration; that a careful watch should be maintained lest symptoms of a serious bromism appear, and on their development, the bromide should be stopped, no matter how urgent is the apparent necessity for its continuance; that where the attacks are not absolutely controlled, the bromides should be occasionally interrupted in order to allow the patient to regain his normal condition, instead of increasing the dose, that only in those cases in which the bromides procure complete, or almost complete immunity, should their use be continued without intermission for a long period of time; and that while employing these remedies care should be taken to prevent disturbances of digestion from their administration.

Medical Societies.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

Thursday evening, December 27, 1883. The President, Dr. Tyson, in the chair.

Case 1. Fracture of the Base of the Skull.

Exhibited by Dr. Guy Hinsdale.

J. H. W., æt. 50, fell on the ice December 8, 1882, striking upon the stone pavement. The blow was received upon the posterior and left side of the skull, and the skin was not broken. He was shortly after admitted to the Episcopal Hospital, and was totally unconscious. Blood was

found flowing from his mouth and left ear, and his nose contained clots. His pupils afforded no evidence of his condition, because of an iridectomy which had been performed on both eyes some years previous. He talked incoherently; breathing was labored, and at times stertorous. Paralysis of the left leg was noted.

Blood continued to issue from the left ear, and on the second day the discharge became thin, and continued serous until his death, which occurred on the eleventh day. The urine was examined several times, and found to contain sugar in moderate amount, but no albumen. Urine was passed freely. The patient never regained consciousness; he became more stupid, and paralysis of the left leg remained.

At the autopsy a superficial clot was found over the brain beneath the seat of injury. A very large clot was found over the right frontal region, beneath the membranes, and filling the sulci between the convolutions. This was the result of the counter-stroke, the force having been first received at a point diametrically opposite, and fully accounts for the left-sided paralysis. The fracture was slightly over five inches in length. It extended from a point in the left occipito-parietal suture, one and a half inches behind the temporal bone, and traversed the suture, passing through the petrous portion of the temporal, the auditory canal, close to the inner side of the foramen ovale, towards the foramen rotundum, where it terminated.

Case 2. Necrosis of the Temporal Bone and Brain Abscess.

This specimen was removed from the body of Margaret P., æt. 46, who died in the Episcopal Hospital, September 21, 1882, after long-standing aural disease.

In early childhood she had scarlet fever; this was followed by aural catarrh, and the discharge from her ear continued until death. She stated that when twenty-two years of age a polypus could be seen in her ear. Fifteen years ago this was removed; again masses were removed thirteen years, two years, and one year ago.

In May, 1883, four months before her death, the patient consulted Dr. Burnett, who has very kindly furnished me with notes of that date. The patient presented, at that time, a most wretched appearance. Extreme weakness, pallor, and emaciation betrayed the intense suffering of this unfortunate woman. Paralysis of the right side of the face had occurred during the previous winter, without the supervention of additional ear symptoms. At the time of examination she presented great sensitiveness of the auriculo-temporal nerve, and complained of intense pain over the right temporal bone. To control this pain, she was accustomed to use morphia suppositories. An examination of the ear revealed a mass of granulations filling the entire lumen of the auditory canal, half an inch from the entrance. Late in May a large polypoid mass was extracted; bare bone was then discovered on the posterior portion of the canal, the channel narrowed and blocked with granulations. About two fluid ounces of blood escaped after removing this mass.

When I saw the woman at the hospital in September, she was in a very low state, and evidently near her end. Her mind was seriously affected, conversation was impossible, and she groaned with the pain, which large doses of morphia would not altogether control. There was a moderate but constant purulent discharge from the ear and from a sinus which was found above the meatus. The whole temporal region was boggy. The probe passed in freely over an inch, and loose particles of dead bone could be everywhere felt. The disease had long been beyond the reach of any remedy, and there was nothing to be done but relieve pain and await her death.

The specimen removed embraces portions of the right temporal, parietal, and occipital bones. Almost all the temporal bone has been destroyed. Only the mastoid process and the upper border of the squamous portion remain. An area of bone 1½x2 inches has entirely disappeared. Adjacent to this region, and lying next to the middle fossa of the skull, was a brain abscess, the walls of which were greatly thickened. On opening this cavity, about an ounce of thick yellowish pus was found. A probe easily reached this cavity through the auditory canal and the sinus above it, and many loose fragments of bone were found at the outlet. The styloid process was found loose, but held in position by the various ligaments that arose from it. The inflammatory process, in which the meninges had of course shared, was not acute, the brain substance beyond the abscess walls had no unusual appearances, and the left cerebral lobe with its membranes were normal.

Dr. C. H. Burnett thanked the Society and Dr. Hinsdale for the opportunity of seeing this very interesting specimen, and of making a few remarks upon the case. The great destruction of bone tissue is remarkable and unusual in extent, being three inches in length, and one and one-half to two inches in breadth. The necrosis seemed to have originated in the tympanic region rather than in the mastoid, and hence belongs to the class of cases second in frequency—the most frequent being those fatal cases where the bone disease originates in and extends from the mastoid cavity. The case when seen by Dr. Burnett in the spring of 1883, presented very grave symptoms, and the patient was extremely weak; so much so that Dr. Burnett was surprised that she lived until September. The occurrence of extensive granulations in the external auditory canal constituted a very unfavorable feature, as they acted like a dam, preventing the escape of the products of inflammation, and held them back in the tympanic cavity and mastoid cells, forcing them to break an escape through more important and vital tissues. The case furnishes another example of the evil of neglect of purulent disease of the ear. Dr. Burnett inquired whether there were symptoms of destruction or implication of any of the nerves passing through the cavernous sinus, as would be shown by alteration in parts supplied by the oculo-motor, the pathetic and ophthalmic nerves.

Dr. Hinsdale replied that no eye symptoms had been ever detected.

Case of Phthisis with Empyema.

Presented by Dr. H. M. Fisher.

The patient, J. C., æt. 21, was admitted to the Episcopal Hospital, March 17, 1883. The following notes of the case were taken by Dr. George M. Boyd, the resident physician:

Patient states that he has had a slight cough for one year, but was not much annoyed with it until about one month ago, when he was seized with severe pain in the left chest, accompanied by chilly sensations and difficulty of breathing. Upon admission, he presents all the symptoms of left pleural effusion, absent vocal fremitus, tubular breathing, and bronchophony in the neighborhood of the spinal column on the left side. His chest was tapped on the morning of March 21, and three pints of a semi-purulent fluid were evacuated. The operation was followed by great improvement in the patient's symptoms. Three weeks later he left the hospital, contrary to advice. He was readmitted April 20, and stated that soon after leaving the hospital, the pain in the side returned, followed by dyspnœa.

April 23. Paracentesis thoracis was performed by Dr. Henry, and fifty-six ounces of purulent fluid were drawn off, and the operation again afforded great relief. A violent fit of coughing followed the withdrawal of the canula. The heart's apex beat was found, before the operation, to be immediately below the right nipple; after the operation, it was found to have shifted one inch to the left, or its previous position.

May 5. Dr. Forbes operated at Dr. Henry's request, making two openings into the left pleural cavity, one at the fifth interspace, the other at the fourth, and to the right of the first. Ten ounces of purulent fluid were withdrawn by means of aspirator, and a soft rubber catheter was passed in at one of the openings and out at the other. The pleural sac was then ordered to be washed out daily with a solution of corrosive sublimate gr. i.–℥ j.

During the summer the patient's general condition seemed for a time to improve; his appetite, however, continued obstinately bad, and he had constipation alternating with diarrhœa. In October it was noted that he was losing flesh and strength rapidly, and that there was much œdema of the feet and legs. During this month diarrhœa became a constant symptom, and death occurred November 22.

Post-mortem Examination, Ten Hours after Death.—The body is extremely emaciated. The left lung is contracted to about one-fourth of its normal size, contains in its upper lobes some cheesy masses with areas of catarrhal pneumonic infiltration. The left pleural cavity contains about five ounces of ichorous pus. The parietal layer of the left pleura is so tightly adherent to the chest wall that it is impossible to detach it without dissection. The pulmonary layer is also tightly adherent to the contracted left lung, the lobes of which are firmly matted together by adhesions. The *right* lung also presents numerous cheesy foci, with large areas of catarrhal pneumonic infiltration. The heart is rather small, and its tissue is pale, but its valves appear normal. The liver weighs 6 pounds 6½ ounces, its tissue is pale, and it has a *markedly waxy appearance*. The spleen is much enlarged, its tissue *firm and of a dusky-red hue*. Numerous *yellowish-white nodules* are also seen in it, the largest of which is perhaps the size of a small pin's head. The kidneys are rather large, their capsule is non-adherent, and their tissue rather paler than normal. Numerous *minute whitish nodules* are also found to be scattered through the tissue of both kidneys. These appear rather more numerous and larger in the cortical portions, but are also found in the medullary portion. From some of the larger nodules a whitish puriform substance can be squeezed out with the blade of the knife. With the naked eye the exact nature of the above-mentioned infiltrations of the spleen and kidneys is difficult to determine. Nothing abnormal was noticed in the intestinal tract, except in the ileum, where an area of intense congestion was noticed, about one yard from the ileo-cæcal valve, but no ulceration was anywhere detected.

My view of the sequence of pathological events in this case is the following: *First*, catarrhal pneumonia, with the production of cheesy foci; *Secondly*, scrofulous inflammation of the pleura, with attendant exudation, which, from the start, was more or less purulent, and *thirdly*, the infiltration of the *liver*, *spleen*, and possibly also the kidneys, with amyloid matter.

The exact nature of the yellowish-white nodules in the spleen and kidneys being yet undetermined, I cannot yet assign to them a positive place in the chain of scrofulous processes; but, from the absence of any macroscopic evidence of embolic infarcations, or of any appearance of infarction in the one microscopic section of the kidney I had the opportunity of examining (kindly made for me by Dr. Henry), I should conclude that these were also cheesy foci, and their production may perhaps have nearly coincided in point of time with the production of the cheesy foci in the lungs above alluded to.

Dr. Shakespeare said that the specimen was a good instance of miliary tuberculosis. The small collection in the spleen might be tuberculous, he thought, and should have been examined for tubercle bacilli. He adverted to the successful employment of very weak solutions of corrosive sublimate in washing out suppurating serous cavities.

Atheroma, dilatation, and aneurism of the aorta atheroma of some of its branches; death from rupture of the aneurism into the left pleural cavity; congenital deformity of the stomach; malposition of the transverse colon and right kidney; irregular shape of the kidney; anomalous origin of the renal arteries and of the ureter.

By J. H. Musser, M. D.

This remarkable series of specimens illustrate how serious a disease can be in progress within the body without any manifestations. The patient had been under the care of Dr. Ludlow, in the Presbyterian hospital, complaining of and being treated for nasal catarrh. He complained also of a slight bronchitis, but not being very decided, the nasal trouble alone was treated. A white man, æt. 63, well nourished, of temperate habits, and by occupation a wheelwright; he was under observation ten weeks; no previous illness. He slept well the night before his death, until 5 a. m. He then told the night nurse he was very cold. Being covered, he went to sleep apparently; an hour afterwards he was found dead. The writer made the autopsy, about twelve hours after death.

Inspection.—Rigor mortis well marked; body well nourished; no scars or bruises; no ecchymoses; abdomen moderately distended; in the right lower

quarter a decided swelling was noticed, almost filling that area, and resonant on percussion.

Section.—Abdominal cavity first examined. The above described swelling was due to the cæcum and transverse colon. The ascending colon extended about half way the usual distance, and then turned at a sharp acute angle into the transverse colon. The latter descended parallel to the former into the right iliac fossa, and from thence diagonally upwards across the abdomen to the usual place of junction with the descending colon. The omentum contained a considerable amount of fats. The right lobe of the liver could not be seen until removal of the ribs, when it was found two inches above their margin, and to be only 2½ inches in length in the nipple line. In the median line this same perpendicular length was three and one-half inches. More of the left lobe was visible than the right. Along the edge of the left lobe, from the median line, four and one-half inches in length, extended the *stomach*. It appeared to be small in size. When removed, it was found to be divided by a constriction five inches from the fundus; from this constriction to the pylorus the length was four and one-half inches. The first, or cardiac end, was much smaller than normal, the walls and mucous membrane healthy. The second portion was a mere tube with thick walls. The thickening was due to the hypertrophy of the longitudinal muscular layers, and to the folds that the mucous membrane was thrown into. These folds were very marked, longitudinal, and on their crests congested. The peritoneum was opaque and thickened. The *liver* was smaller than usual also. The capsule was thickened and opaque along the edges of the right lobe; on its convex surface there were cicatrices and a firm adhesion at one point to the diaphragm. On section, the tissues were firm, on pressure congested. Commencing cirrhosis noted on microscopical examination. The gall-bladder projected one inch below the liver margin in the nipple line. The left *kidney* was found in its normal position. It was much enlarged, five inches long, two thick. The pelvis was filled with fat, the substance pale, hard on pressure, with a contracted cortical portion. The capsule tore off easily. The right kidney was found in the pelvis at the right sacro-iliac articulation. It was small in size, irregular in shape, parallel to the sacrum. The portion dipping downwards tapered to a point, being one-half inch in width; the upper portion was two inches wide. The pelvis of the kidney was filled with fat. Towards the small end of the kidney the hilus divided, one part extending upwards one inch, along one side of the organ, the other the same length on the other side; or it might be said a portion of the kidney dipped into the pelvis, separating it for an inch. The renal artery arose from the normal origin of the middle sacral. One inch from the point of origin it divided; one branch, two and a half inches long, entered one lateral hilus, if it may be so termed, the other divided two and a half inches from the main trunk, one subdivision entering the remaining lateral hilus, the other running across the floor of the pelvis to the normal end of the kidney. The ureter arose by three branches—two from the upper end, one from one of the smaller pelves.

Thoracic Cavity.—Left pleural cavity almost filled with blood, the lung floating on the fluid. The lateral surface was adherent to the aneurism. In its removal the collapsed sac was seen on the left side of the vertebral column. The heart and aorta were removed entirely.

Heart.—Enlarged, left side especially; weight, 11½ ounces; measurements of left ventricle, near base, 1⅛ inches thick, in the middle ⅞ of an inch thick, at apex ½ inch thick; mitral valve a little thickened, aortic healthy. Atheromatous processes were present in the aorta from its beginning to the cœliac axis, and extended into the latter vessel, and also the innominata and carotid arteries. These processes included the sclerotic changes shown by innumerable small, smooth, firm elevations of the surfaces, the degenerative changes, fatty and calcareous, and also the atheromatous. One calcareous plate was found in the coeliac axis. From its origin to the middle of the transverse aorta, the vessel was dilated, and the characteristic fatty changes of the proliferated cells of the intima lemon-yellow colored, smooth, soft elevations, were marked. Opposite the trachea the caliber of the aorta diminished to almost normal size, and here the sclerotic changes were most marked, as well as around the mouths of the vessels. At the junction of the transverse and descending aorta, the lumen was again closed; here the aneurism originated. It was 5½ inches long, and when distended 12 inches in circumference. It was of the true variety, but from it sprung four false aneurisms, varying in size from a filbert to a small egg. Organized clots covered the surface of portions of the wall, and on dissection it was found these clots were either in the false aneurisms or clinging to atheromatous ulcers. Rupture of the sac took place behind the pleural adhesions, and leaked into the cavity, finding its way through the adhesions. The vertebræ were not eroded, and although the sac was in contact with the left bronchus, there was no evidence of decided pressure upon it, while the relations to nerves, other vessels, and the œsophagus, were such that the usual pressure symptoms could not arise.

It is thus seen that by physical examination alone could this aneurism have been detected. There were absolutely no subjective symptoms, and the autopsy reveals the reasons of this.

Hour-glass Contraction of Stomach: Congenital.

Presented by J. H. Musser, M. D.

The patient, an adult, from whom I removed this stomach, died of organic heart disease. Constant vomiting occurred a few months before death, but as a sequence of the general condition of the patient, and not on account of the gastric changes. I call the appearance congenital, because of the absence in the clinical history of any occurrence throughout life to have caused it, and of the want of evidence on post-mortem inspection. The contraction took place in the centre and was transverse; the peritoneum and sub-mucous connective tissue was thickened at this point. Anterior to the constriction, the muscular coat was hypertrophied. The mucous membrane was thrown into folds in the constriction.

Lung from a Case of Pleuro-pneumonia, Complicated with Delirium Tremens.

Presented by J. H. Musser, M. D.

I present this specimen to-night on account of its perfection. It is the lower lobe of the right lung in the stage of red hepatization, as indicated by the appearance, weight, etc. Almost the entire pleural surface including the diaphragmatic, is covered with recent lymph, the layer averaging one-half inch in thickness. The tongue of the lung dipping into the space between the diaphragm and the thoracic wall is not solidified entirely. Here the lymph is abundant, and the contiguous portion of the lung is hepatized as if the inflammatory process extended from the pleura; this peripheral hepatized portion is but one-fourth inch wide; the inner and succeeding portion is not solidified.

The patient died eighteen hours after admission to the hospital, from heart-clot. When admitted there were evidences of its formation, and in addition he had delirium tremens. The pneumonia was distinctly recognized. There were no signs of simple or diaphragmatic pleurisy. It was remarked at the autopsy on removing the sternum, the extreme distention of the right heart, especially the auricle. On opening the heart, hypertrophied from other causes, the right side was found filled with blood and an enormous ante-mortem clot entwined around the leaflets of the tricuspid valve, and extending through the auricle into the pulmonary vessels. A similar clot was found in the left heart. The kidneys were congested, and commencing cirrhosis appeared manifest.

The history of this case antecedent to the admission to the hospital is as follows: The patient had been on a "spree" for two weeks, and five days before admission had had a severe chill, followed by the symptoms of pneumonia. Two days after the chill the mania developed, and on the day of admission he had been found wandering about the streets by a "crony," who brought him to the hospital. He was forty-one years old, a boss machinist, single, of intemperate habits.

Carcinoma of the Uterus, Fatty Kidneys, and Empyema.

By W. A. Edwards, M. D.

The specimens which I show you to-night were taken from the body of A. E. this morning. I have not, as yet, had the opportunity of examining them microscopically. The patient was visited but once before her death, by Dr. J. S. Watt, for whom I made the post-mortem examination. The history of the patient is of course imperfect, in fact little if any could be obtained; the symptom of which she complained the most was an ill-smelling, irritating discharge from the vulva; so our attention was first directed to the womb, which presents a scirrhus carcinoma of the external and internal os and of the cervical canal. The mucous membrane of the organ is softened and very rugous, looking not unlike a mammilated stomach; a microscopic section will probably show cellular infiltration. The uterus is enlarged; our subject was a multipara, æt. 45, nine children and two miscarriages. A cyst was seen in the right parovarium; its contents were pure serum. The ovaries presented areas of calcareous degeneration; other pelvic viscera normal. The kidneys are small, and appear to have undergone some amyloid change; the right one was a rib higher than its normal position. Heart muscle has undergone some fatty degeneration, as has also the aorta; valves almost normal, ante-mortem clots in each ventricle; that in the right is of unusual size. Pericardium contained the usual straw-colored effusion.

Lungs.—Left normal. Right, the pulmonary and costal pleuræ were in many places adherent by thick, well organized lymph, which beautifully illustrates the rationale of friction râles, their sudden appearance, short duration, and equally sudden disappearance. About a pint of purulent effusion was collected in the base of right chest. The diaphragmatic pleura was tightly adherent to the pulmonary, requiring some tearing in order to separate. The lobes of this lung are bound down by recent lymph. Scattered throughout the mesentery were to be seen areas of calcareous degeneration, about the size of almonds.

EDITORIAL DEPARTMENT.

PERISCOPE.

Dyspepsia as a Symptom of Kidney Disease.

The following is from a clinic of Dr. J. M. Da Costa in the *College and Clinical Record*, January, 1884: Robert E., a waiter, born in Scotland, was admitted into the ward October 15, 1883. He states that he has suffered with dyspepsia for the last fifteen years, but has had no serious illness in that time. In order to relieve his indigestion and want of appetite, he has been in the habit of taking a drink of whisky before breakfast, for ten or twelve years, and possibly more during the day, but he claims that he was not intemperate. He came here complaining of pain in his stomach, with frequent vomiting, both of food and of mucus; pain between his shoulders, constipated bowels, and bleeding piles.

Here is a man with a history of chronic indigestion, accompanied by loss of flesh; he has that peculiar melancholy look which comes from long-standing dyspepsia. He says that food lies heavily upon his stomach; he is troubled with wind, due to slow digestion; he has acid eructations occasionally, and gastric pain after meals. He states that he has lost from thirty-five to forty pounds of flesh in the last nine months. He is therefore losing flesh very rapidly, as you may see.

Before examining him, I would also tell you that he is also annoyed by palpitation or over-action of his heart. The temporal vessels are well developed; they are rather tortuous, and visibly pulsate. He has a pale, flabby tongue, showing the marks of the teeth.

Now, gentlemen, this patient, at first sight, seems like an ordinary case of chronic dyspepsia;

but the decided loss of flesh and the appearance of anæmia which he presented, seemed to me so out of proportion to the dyspeptic symptoms that I investigated the case further. This wasting and anæmia suggested a careful examination of the urine, and I think that I have found in that examination the true explanation of the case. The urine was albuminous, and it contained tube-casts; the specific gravity was rather low, 1.014. He states that he has had to rise at night to pass water, for many years. Now, you have before you a case which is of interest in this connection: This history of anæmia in a case of so-called dyspepsia is really quite the reverse; the dyspepsia is a secondary affair, and the symptoms are really due to the kidney disease. He has the form of renal disorder known as the contracted kidney, and with this the symptoms of gastric catarrh often assume such prominence as to lead to the belief that they are the only indications of disease. I point out the case as one in which the kidney disease is the most important feature. I also think that it was primary; it is difficult to say if it was really so or not, but it is not difficult to say that at the present time it is the constant drain from the kidney which causes the anæmia and impairs the general health.

I need not review the clinical features of the case of which I have just given you the key. Let us turn to the question of treatment. He was, for a time, upon a purely milk diet, with lime-water, and that was very effective in stopping the vomiting; he was subsequently allowed to eat eggs, and an albuminized diet, without meats. He was ordered five grains of pepsin after each meal, stopping all other prescriptions, and keeping him in bed. Partly with a view of improving his blood, and partly to act upon the kidney, I will now order him Basham's mixture. (℥ ss. t. d.)

The Relation of Physiological Study to Pathology and Therapeutics.

In an interesting lecture in *Science*, Dr. H. Newell Martin says on this subject: I must find time to say a few words as to the connection of physiology with pathology and therapeutics. The business of the physiologist being to gain a thorough knowledge of the properties and functions of every tissue and organ of the body, he has always had for his own purposes to place these tissues under abnormal conditions. To know what a muscle or a gland is, he has to study it not merely in its normal condition, but when heated or cooled, supplied with oxygen or deprived of it, inflamed or starved, and see how it behaves under the influence of curare, atropine, and other drugs. From the very start of physiological laboratories, a good deal of the work done in them has necessarily been really experimental pathology and experimental therapeutics. I suppose to-day that at least half of the work published from physiological laboratories might be classed under one or other of these heads. And what has been the fruit? I can here refer only to one or two examples. It is not too much to say, that, though inflammation is the commonest and earliest recognized of pathological states, we really knew nothing about it until the experimental researches of Lister, Virchow, and Cohnheim: and that all we really know as to the nature of fever is built on the similar researches of Bernard, Haidenhain, Wood, and others. As to therapeutics, so far as giving doses of medicine is concerned, it, still in its very infancy, had its birth as exact science in physiological laboratories. Every modern text-book on the subject gives an account of the physiological action of each drug. What the future may have in store for us by pursuit of these inquiries it is hard to limit. The work of Bernard—showing that in curare we had a drug that would pick out of the whole body, and act upon, one special set of tissues, the endings of the nerve-fibres in muscle—and the results of subsequent exact experiments as to the precise action of many drugs upon individual organs or tissues, hold out before us a hope that perhaps at no very distant day the physician will know exactly, and in detail, what every drug he puts into his patient is going to do in him.

Pathology and therapeutics, while almost essential branches of physiological inquiry, have nevertheless their own special aim; and, now that the physiologists have proved that it is possible to study these subjects experimentally, special laboratories for their pursuit are being erected in Germany, France, and England. These laboratories are stocked with physiological instruments, and carry on their work by physiological methods. Those who guide them, and those who work in them, must be trained physiologists; if not, the whole business often degenerates into a mere slicing of tumors and putting up of pickled deformities: pathological anatomy is a very good and important thing in itself, but it is not *pathology*. Looking at the vast field of pathological and therapeutic research open to us, and bearing in mind the certainty of the rich harvest for mankind which will reward those who work on it, I regard as one of my chief duties here to prepare in sound physiological doctrine, and a knowledge of the methods of experiment, students who will afterwards enter laboratories of experimental pathology and pharmacology immediately connected with our medical school.

Reflex Uterine Vomiting.

Dr. Graily Hewitt thus concludes a paper on this subject in the *Lancet*, January 5, 1884:

According to my experience, reflex uterine vomiting when of an obstinate character is very frequently associated with great weakness and want of tonicity of the uterus, and a flexed condition of the organ is almost invariably also present. There are undoubtedly cases of reflex uterine vomiting in which the cause is a different one, but they are exceptional, and occur rarely. The unduly soft uterus readily bends, and any temporary increase in the degree of the flexion is attended with aggravation of the reflex disturbance—viz., the vomiting. This is a fact with which observation of many cases has made me acquainted. The several factors concerned in the production of this grave disorder may be enumerated as follows:

1. A general enfeeblement of the body, the result of a low condition of the nutritive process, in which the uterus participates.

2. The physical weakness and pliability with which the uterus is consequently affected.

3. The flexed condition of the uterus, liable to

be intensified by certain movements or positions of the patient.

The sickness and vomiting appear to result from the irritation of the uterine nerves consequent on the temporary or permanent compression of the uterine tissues. It is almost certainly relieved, or for the time, at all events, removed, by measures having for their object the maintenance of the uterus in a normal position and shape. In two of the three cases above related, immediate relief was obtained from the treatment. The third is a case in which the condition of the ovary introduces a complication and increases the difficulty.

On the diagnosis of reflex uterine vomiting I may, in conclusion, add a few remarks. There is no doubt that many cases of this affection escape true recognition, the sickness being erroneously attributed to the liver or the stomach being the seat of disease. Many cases of so-called "bilious vomiting," and not a few supposed of gastric ulcer, turn out on investigation to be cases of uterine vomiting pure and simple. As regards the liver and the stomach, it will be found possible to exclude these organs as causes of the vomiting from the fact that apart from the vomiting there is no other symptom indicative of disease of the organs in question; while, on the other hand, there are generally marked symptoms indicating that the uterine functions are disturbed. One symptom specially indicative of the uterus as the cause of the sickness is the exaggeration of the sickness which is liable to occur when the patient moves or walks or exercises herself. It must be added also that in cases of reflex uterine vomiting, where the malady has been of long continuance, the stomach itself is liable to become affected. The secreting power of the stomach is enfeebled by the long-continued starvation; and it is no longer capable of producing gastric juice to any amount, which adds another factor to the pathology of such cases. Hence, a quasi-paralysis of the gastric mucous membrane; and I have seen cases of this kind in which the extremest care was necessary to prevent a fatal issue, even after the tendency to vomit had been obviated or diminished by appropriate treatment.

Bromide of Ethyl in Obstetrics.

The *American Jour. of Obstetrics*, January, 1884, tells us that Müller reported to the German Gynecological Society, that following in the wake of the experiments repeatedly made of late (especially by Heckermann, of Berlin, fifty cases), he has employed ethyl bromide in twenty-two cases of labor. The results were not as favorable as those obtained by H. The action is uncertain. M. employed it thirteen times in the second stage. In five of these cases the labor pains ceased altogether; in three, they ceased in part; in five, no effect was produced. The drug was used eight times during the whole course of labor: in two, the effect was very good; in four, the effect was temporary; in two, the pains were obtunded only in the first stage. On the average, fifty to sixty grams of the drug were employed. During the narcosis, the pupils dilated and the face became congested. Little effect was produced on the pulse and respiration. M. believes that the retardation in the activity of the contractions is merely apparent. He has witnessed no post-partum hemorrhages and no mal-involution of the uterus.

Quite noteworthy is the fact that a very severe bronchitis set in during the puerperium in two of the cases. The purity of the drug was established by chemical examination. Perhaps the quantity employed (eighty grams) was too large.

Schatz (Rostock) said he was glad that the narcosis of the normal parturient had not thus far become the rule in Germany. The kymographion shows that chloroform narcosis considerably reduces the force of the contractions. He ascribes the large number of post-partum hemorrhages in England to the frequent employment of chloroform. He fears that similar drawbacks attend the use of bromide of ethyl.

Neugebauer (Warschau) called attention to some points in Heckermann's lecture, which he had heard in Berlin; he stated that Rose likewise had experimented with the drug. The latter objected to it because the odor of the expired air of persons anæsthetized with bromide of ethyl was disagreeable to patients in the same ward.

Mueller stated that he, too, had noticed a garlicky odor in his patients, but it was never strong enough to be really objectionable. He added that the drug seemed to affect the fœtus rapidly, the expired air of which likewise diffuses that odor.

Hegar had tried various anæsthetics, but had always returned to chloroform. Ether may also be the cause of violent bronchitis which may be fatal to debilitated persons. Bichloride of methylene has the advantage that it has no depressant effect on the heart. Breisky has had one case of death from this drug. Chemical examination showed that the preparation was a mixture of chloroform and alcohol. H. likewise had his sample tested. The result was the same. He thinks it advisable to put the patient under chloroform toward the end of the second, but particularly of the first stage.

Mueller had also experimented with chloral (five grams). The pains were moderated in the first, but not in the second stage.

Trephining in Head Surgery.

Dr. S. H. Benton contributes an article on this subject in the *Proceedings of the Medical Society of the County of Kings*, which thus concludes:

The deductions I draw from my own experience in head injuries, are:

1. That almost all compound depressed fractures of the skull, without operative interference, are fatal.

2. That there is great danger in making a simple fracture of the skull compound, is more imaginary than real.

3. That the therapeutic method is negative, and a virtual surrender to death.

4. That the trephine, early used, is the best, and I think we can safely say the only agent in the hands of the surgeon to save life in these cases.

The after treatment forms no inconsiderable part in conducting our cases to a successful issue. I refer more especially to the local treatment.

There are no capital operations where antisep-

sis can be practiced with greater profit, not excepting abdominal surgery, and it should be carried out to the most minor detail. The agent I have used, in all my cases, has been carbolic acid.

I am careful to remove all spicula and bone dust from the wound. I remove all depressed fragments, unless I am satisfied that their attachment to the skull is broad enough so as that the nourishment shall not be interfered with. I take no chances in this respect.

The wound should not be drawn together by sutures, with the hope of securing union by first intention. You may, if you choose, draw the edges of the wound reasonably near together, but not quite.

There must be a chance for free drainage of the *debris*, if any be overlooked, as well as the natural products of inflammation, which, if confined, would undoubtedly produce the usual result, viz., septicæmia, and all that that implies. Some one has told us that "cleanliness is next to godliness," which, in these cases, as well as most cases of surgery, is true; therefore I keep the wound scrupulously clean, giving it my personal attention, and trusting to no nurse for this.

If any part of the brain should protrude later in the case, as usually occurs if the dura mater is much injured, I slice it off with the knife. This I find to be the best plan, as I have found it impossible to bring pressure enough to bear so as to press it back, and two or three times alarming head symptoms were produced by the effort. Astringents I have found useless. I have never seen ill effects follow the use of the knife.

The indications for internal medication in all my cases have been very few. They were all young and vigorous subjects, as well as temperate in habits.

No medicine was given, unless there was a present indication for its use—nothing for a possible future complication.

A New Disease.

We find the following in the *Brit. Med. Jour.*, January 12, 1884:

Some little time ago a man living in a secluded country district, consulted Mr. Treves, of Margate, on account of a number of sores, which had made their appearance on the side of the neck and on the chest. The first sore had "come of itself," about two years ago, on the left side of the neck, just above the clavicle; subsequently the others appeared, one after the other, to the number of four, in an oblique line across the chest. The largest of these, the one nearest the primary sore, was the first to appear, and the others appeared as they were arranged, in series; there was also over the left side of the jaw, near the primary sore, another, pierced by a sinus leading down to the bone. The circumstances evidently suggested some infective process; the first sore was an excavated ulcer, with an irregular caseous-looking base, but the sores below this projected from the surface as much as half an inch in their centre, had a semi-gelatinous look, and an excoriated surface. Altogether, these latter sores rather resembled the small growths seen in some cases of sarcoma of the skin; but the case, taken as a whole, was evidently not one of sarcoma, and after due consideration, Mr. Frederick Treves, of the London Hospital, to whose care the patient had been transferred, exhibited the patient at the Pathological Society, as probably a case of actino-mycosis. The disease has been known to veterinary surgeons as maxillary sarcoma, and the whitish tumor substance produced was the simple embryonic structure seen not only in some sarcomata, but also in the infective new growths. Bollinger had shown that the tumors contained in cavities in their interior little yellow bodies, which consisted of matted masses of mycelium. This fungus, from the peculiar radiate appearance presented by it in sections of the growth, he named actino-myces. Israel, of Berlin, first described the disease in man, and attributed it to a new form of fungus, but without apparently identifying it with the disease of cattle, as Ponfick did later. However this may be, there will, we imagine, be little question that this case now brought before the profession by Mr. Treves is the first which has been recognized in this country, that is, if the diagnosis which is at present made tentatively prove to be correct. On this point the only positively conclusive evidence is the discovery of the fungus; and on Saturday last, at the London Hospital, Mr. Treves examined the growths, which were distinctly pedunculated; and Mr. Watson Cheyne, who holds one of the Research Scholarships of the British Medical Association, will, we understand, make a complete examination.

Hygiene vs. Diphtheria.

In the *Cinn. Lan. and Clinic*, January 26, 1884, Dr. Mary J. Finley discusses the recent epidemic of diphtheria at Mansfield, Ohio, and thus concludes:

After a full consideration of all the facts which I have been able to gather, I can only arrive at the conclusion that neither sanitary conditions nor water supply, either originated the present outbreak of diphtheria in this city, contributed to its spread, or increased its virulence—except in so far as the cold, moist atmosphere from damp cellars conduces to catarrhal affections of the respiratory mucous membrane, rendering it weaker to resist the special contagion of diphtheria, and in so far as the general deterioration of vital processes induced by any impurity of air or water, renders the system less able to throw off the poison of disease, and less able to maintain its integrity until the disease shall have spent its force.

While the present report shows that there may be some connection between the malignancy of diphtheria and bad sanitation and impure water, yet the very multiplicity of the presumed unsanitary conditions precludes the possibility of ascribing a specific influence to any one of them. Well water, sewer gas, damp cellars, foul soil, rotting garbage, and filled lots, appear to have exerted an equal influence. Are we to suppose that the special poison of diphtheria is engendered by or finds its favorite nidus in each of these? Yet to each of them has been ascribed with as much justice the causation of various other diseases, typhoid, scarlet, and yellow fevers, dysentery, cholera, erysipelas. Must we believe that each of them possesses some half dozen different

poisons, each of which is at some time, for some unexplained reason, in the ascendant? Or shall we not rather believe that given the specific cause producing any epidemic disease, all factors which tend to a lowering of the standard of health render the individual more liable to succumb to its influence and less able to endure its effects?

A careful study of a number of reports on diphtheria in different parts of the United States and in other countries, has convinced me that epidemic diphtheria occurs with almost equal malignancy under the best and the worst sanitary conditions. The most desirable hygienic surroundings, and the most irreproachable water supply, afford no security against its attack.

The Treatment of Gangrene of the Lung.

After reciting a case, in the *Dublin Jour. Med. Sci.*, January 1884, Dr. Finny formulates the following propositions:

1. That the primary indication in cases of extensive gangrenous cavities is to prevent the putrid matter becoming a centre of infection, and thereby not only poisoning the whole system, but by its direct contact (*a*) causing an extension of the gangrene in the neighboring tissue of the lung, or (*b*) by being sucked into the bronchi of the other lung or other lobes of the same lung, inducing a gangrenous broncho-pneumonia. In the words of Hertz (Ziemssen's *Cyclop.*, Vol. V., p. 431) "the *indicatio morbi* also imperatively demands the evacuation of the sputa out of the cavity," and in connection with this I may mention that inversion of the patient's body, as in drowning, has been suggested.

2. That in cases of diffuse gangrene the probability of recovery is extremely small. Indeed, according to most observers diffuse gangrene from its nature runs an inevitably fatal course, and that therefore to attempt to cure such cases by antiseptics taken internally, such as tinct. eucalypti in 6–8 grm. doses a day (as advocated by M. Renaud in the *London Medical Record*, Vol. viii., 1880, p. 229), or by inhalations of carbolic acid, turpentine, etc.. is but to dally with the disease and to give it greater head.

3. That under these circumstances it is a justifiable proceeding, if not the right treatment, to provide means of evacuating the cavity of its rotten and putrefying contents through the skin.

4. That the operation of incision and tapping of basic cavities in the lung is one which has been successfully performed with immediate benefit, and that when death has occurred in cases so operated on, death has not been directly due to the operation, but rather to its not having been thorough and efficient enough.

5. That in cases of diffuse gangrene of the middle or upper lobes, operative proceedings are quite as urgently, if not more urgently, called for as when it is of the lower lobe, since from the natural gravitation from the upper to the lower lobe there is greater risk of secondary infection of the dependent part.

6. That exploratory puncture and aspiration should be first attempted, and should the cavity be reached, immediate steps be taken for incision and tapping.

7. That the incision should be over the centre of the cavity, as well as can be accurately determined, and wherever it approaches nearest to the chest wall, and it may thus occupy the anterior as well as the posterior wall of the chest.

8. That the question as to the mode of operation is one at present upon which opinions differ, though it seems to me advisable that an incision should be made only down to the intercostal muscles, and that afterwards a trocar and canula should be passed into the lung to a depth of 3–4 inches, and that a drainage-tube of sufficient size should be substituted for the canula.

The Use of Tobacco by Boys.

In the course of an article on this subject, Dr. Edward O. Otis (*Boston M. and S. Jour.*, January 31, 1884,) says:

The evil effects, then, of tobacco upon boys which can be said to have been fairly proved by observation, are:

1. An interference with and impairment of the general development, physically and mentally. Probably it does this by retarding progressive cell change, and impairing nutrition. In an adult, the development is attained, consequently he can smoke with impunity so far as this effect is concerned, when the boy only does it with injury.

2. The tobacco heart. This likewise happens to the adult, but is, I should think, more likely to happen to the youth, and with graver result, because his is such an unstable age physically. For this same reason, the other injurious effects are more liable to be intensified in the youth.

3. Defective muscular coördination. I have but little proof to show that this condition is more than temporary, continuing only while the tobacco is used.

4. It reduces the intellectual power of the boy. It does this either by opposing mental application and effort, or else by producing deterioration of the intellect, probably both to a greater or less extent.

5. It impairs the memory. What proof I have adduced seems to show that this is a permanent injury.

6. It may cause defective vision, and also irritation, more or less chronic, to the external parts of the eye.

7. It may unduly excite the sexual system, and lead on to excesses. I have no positive proof of this, but my observation among boys rather points to it.

8. Irritation of the mucous membranes of the mouth and throat, more especially in case of cigarette smoking.

9. It may impair digestion, and produce other derangements, such as habitual uneasiness, hypochondriasis, and so on.

The Radical Treatment of Nasal Catarrh.

The following report of his experience is given by Dr. P. M. Rixey, U. S. N., in the *Proceedings of the Naval Medical Society*, vol. i.:

"The radical treatment consists in the use of either chemical or surgical measures for the partial or entire removal of hypertrophy. The first consists in the use of various caustics, such as acetic acid, chromic acid, London paste, nitric

acid, and nitrate of silver, mentioned in the order in which I prefer to use them. My choice is acetic acid for hypertrophy situated in the nostril, or when these applications have to be made through the nostril; chromic acid to the posterior nares and vault of the pharynx. Nitric acid has to be used very carefully, owing to the difficulty in controlling its action. Nitrate of silver I consider, in the final result, more stimulative than destructive. Each application of the above escharotics only removes a superficial slough, and, consequently, numerous applications have to be made at intervals from five to ten days, and in the meantime sprays or douches have to be used daily to keep the parts clean. I soon came to the decision to use them only in those cases of moderate hypertrophy, and find something more radical in its immediate effect; this is found in the surgical treatment, which consists in the use of forceps, curette, snares, actual or electric cautery, and electrolysis. The forceps and curette I have used only a few times, and usually followed with caustic. The snare I prefer is the improved Jarvis, and it works admirably when the enlargement is considerable, whether anterior or posterior. The actual cautery I have not used, but find that in galvano-cautery I have an invaluable agent, and with the Flemming improved Seiler cautery, and the electrodes displayed here, we can reach almost any portion of the space. These knives can be heated to a bright red instantly by, as you see, a simple pressure of the thumb."

Lumbar Abscess with Peculiar Symptoms.

In the *Brit. Med. Jour*, January 5, 1884, Mr. Stear relates the case of a medical man who died in June, 1883, aged 51. He had always been a strong man, and worked hard at his profession, without ever taking a holiday. During the last four months of 1882 it was noticed that he was thinner and looked aged, but he could ride twenty miles without fatigue. At the end of January he caught cold, and was confined to his bed with severe rheumatic pains in the right gluteal region. After a brisk purge he was better and able to get up, but he did not make much improvement. On February 5th he was seen with Dr. Latham, the symptoms being vomiting after dinner and pain in the hip and thigh. He left home for Ventnor, and afterwards went to Clifton, and returned home much emaciated and very weak. He was seen again by Dr. Latham, but no tumor or evidence of spinal disease could be discovered. On April 8th, Dr. Humphry opened an abscess which had been detected in the back, a large quantity of laudable pus escaping. The discharge continued until his death, on June 25th, from exhaustion. At the *post mortem* examination there was found to be extensive disease on the right side of the bodies of the second, third, and fourth lumbar vertebræ, and erosion of the transverse processes of all of them, extending half-way along the crest of the ileum. The iliacus muscle had disappeared, and its sheath was filled with pus. There was also pus in the psoas muscle. The cartilages were healthy. The stomach was dilated. All the other organs were healthy. Mr. Stear thought it probable that the spinal disease was caused by a fall from a horse, or at lawn-tennis in 1882. The case was of interest from the deceptive nature of the cause of vomiting and emaciation, and from the fact that, although there must have been extensive disease of the vertebræ, he was able to carry on his work.

Rubbing in the Treatment of Diseases of the Eye.

The *London Med. Record*, November 15, 1883, says:

This subject had been brought before the Congress of Naples by Gradenigo; he again read a paper on it in the meeting of the Ophthalmological Association in Padua (*Atti della Assoc. Ottal. Ital.; Annali Univ. di Med.*, June, 1883). He considers rubbing, when used intelligently, a very valuable help in treatment. He had at first limited its employment to affections of the lids, but afterwards used it in affections of the eyeball, especially with the scope of diminishing tension. He related the case of a lady in whom, by this mechanical means, he cured a severe attack of exophthalmitis, accompanied by intense pain. He believes, as the result of his observations, that rubbing is useful in diseases of the lids, of the muscles, of the bulb with increased internal tension, and, lastly, in affections of the optic nerve itself in the orbital cavity, and perhaps even when there is effusion into its sheath. By rubbing, the venous circulation of the orbit and globe is favored, and in this way the beneficial action is exerted.

Reviews and Book Notices

NOTES ON CURRENT MEDICAL LITERATURE.

——Two interesting reprints, that will prove very interesting reading and suggest much food for thought and reflection, have been received from the *Alienist and Neurologist* for January, 1884. The papers are by Dr. C. H. Hughes, of St. Louis, and are entitled, "The Opium Psycho-Neurosis—Chronic Meconism or Papaverism," and "Borderland Psychiatric Records—Prodromal Symptoms of Psychical Impairment."

——Messrs. Palliser, Palliser & Co., architects and publishers, Bridgeport, Conn., have issued a series of charts entitled "Palliser's Useful Details" (price $3.00), giving a variety of useful designs for the construction and ornamentation of buildings. Their plans impress us as sensible, fresh, and decorative, and any of our readers who contemplate building will not regret acquainting themselves with the architectural suggestions and resources of this firm.

——In a reprint on the question, "Shall we Put Spectacles on Children," Dr. Julian J. Chisholm, of Baltimore, answers quite decidedly in the affirmative in all cases where a defective eye renders the sight imperfect. He combats the pre-

vailing notion, which he says is often supported by the family physician, that the use of spectacles at an early age tends to increase and strengthen the optical defect.

——In a reprint from the American Surgical Association, Dr. N. Senn, of Milwaukee, Wis., enters very fully into the treatment and general conditions of fractures of the neck of the femur, with special reference to obtaining bony union after intra-capsular fracture. He offers a new mechanical contrivance of his own, the results from which have been very satisfactory. The paper is well worth careful perusal.

——The report of the proceedings of the sixteenth annual meeting of the Society of the Army of the Tennessee makes a pamphlet of nearly 200 pages. It may be obtained of Gen. A. Hickenlooper, Cleveland, Ohio, and will doubtless interest those of our readers who served in that branch of the national forces.

——The *International Review of Medical and Surgical Technics* is a promising addition to medical literature. It is published quarterly, and is the official organ of the American Association of the Red Cross. Its editors are Drs. J. H. Warren, C. E. Warren, and W. E. Smith. It is published at Boston, 51 Union Park, and the price is $3.00 a year. Its special field is everything new in the mechanical devices applicable to medicine and surgery.

——The operation of the extirpation of the uterus for cancer is severely condemned as unjustifiable by Dr. A. Reeves Jackson, of Chicago, in a paper before us. He sums up his impeachment of it in the following words:

1. Diagnosis of uterine cancer can not be made sufficiently early to insure its complete removal by extirpation of the uterus.
2. When the diagnosis can be established, there is no reasonable hope for a radical cure; and other methods of treatment far less dangerous than excision of the entire organ are equally effectual in ameliorating suffering, retarding the progress of the disease, and prolonging life.
3. Extirpation of the cancerous uterus is a highly dangerous operation, and neither lessens suffering—except in those whom it kills—nor gives reasonable promise of permanent cure in those who recover. Hence it fails in all the essentials of a beneficial operative procedure, and should not be adopted in modern surgery.

His examination of the statistics of the operation bears out fully these positions.

——The thirty-first annual report of the Children's Aid Society of New York City (No. 19 East Fourth street) gives a thoughtful person much food for reflection, and to the philanthropist a glimpse of how wide is the field for charitable effort. In turning the leaves we have been impressed with the analysis of the causes of profligacy among girls, as stated by the experienced matron of one of the Girls' Lodging Houses. The passage is as follows:

What are the causes of so much ruin and destruction? The earliest is, we believe, foolish and immoral reading indulged in by girls, even before they are old enough to earn a living, and just when character is forming. This is the worm in the bud, which parents should watch more closely. Inordinate love of dress and inability to get it honestly sweeps off many. Idleness, ungoverned natures, and false pride, are fruitful sources of degeneracy. There is also a slackening of the sense of responsibility as to the kind of life followed, most serious in its results, as it takes away the motive for effort in the direction of industry and virtue. In the case of poorly-paid servant girls other causes come in, but the great lack everywhere seems to be the right kind of personal influence.

We do not remember to have seen elsewhere such a positive charge against foolish reading (novels and story papers), but we have little doubt that it is correct.

BOOK NOTICES.

Opera Minora. A Collection of Essays, Articles, Lectures, and Addresses, from 1866 to 1882, inclusive. By Edward C. Seguin, M. D., etc., 1 vol., 8vo., cloth, pp. 685. Price $4.50. G. P. Putnam's Sons.

Dr. Seguin's studies have chiefly been in relation to diseases of the nervous system, and hence most of the essays in the present volume bear on some branch of neurology. As there are about a hundred of them, the mere number testifies to his ceaseless activity, and adds to the regret that one feels on learning by his prefatory note that the sad interruption of his professional career is not likely to be of short duration.

But it is not the number merely of these essays which excites our admiration; it is the excellent material they contain, the many acute observations, the close study of symptomatology, the practical grasp on therapeutics, and the wide range of reading. Some of them mark epochs in medicine in this country, as, for instance, the article on the use of the thermometer in clinical medicine, which formed the starting-point of medical thermometry in the United States.

The work is handsomely printed on toned, hot-pressed paper, the illustrations are fairly numerous and clear, the edges are uncut, and the binding attractive.

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THE DEPARTED FEE BILL.

Not long since, a correspondent in a distant state sent to us to obtain for him copies of the fee-bills of this and neighboring cities. We had to reply to him in a paraphrase of the needy knife-grinder of Anti-Jacobin renown—"Fee-bill, God bless you, we have none to show, sir!"

The time was when a printed document of that kind was gravely determined upon at a society meeting, and carefully laid away in the office drawer, to be produced for its effect on grumblers who made a fuss about the physician's charges. That was its principal if not only use, for as a rule to the physician himself in making his charges, it was far more honored in the breach than in the observance. At last it disappeared even as an empty formality, and every doctor was left free to charge little or much, which was generally pretty closely governed by what he thought he could get.

There seems no other way of regulating charges. So much depends on the personal skill of the individual, the demands upon his time, the nature of his specialty, the class in life of his patient, the intricacy or simplicity of a given operation, and other such variable factors, that it becomes practically impossible to lay down any one rule, and still more impossible to have a rule respected.

Unpleasant consequences result from this occasionally. Persons, especially heirs, may object to charges as excessive; and as no established tariff can be shown, the only ultimate appeal is to a jury. One physician obtains a reputation for excessive charges, which another may take advantage of. The young practitioner is often at a loss what to estimate his services at; while the one who is in the hey-day of his fame may be, and often is, extortionate. Having nothing to instruct them as to what a physician should ask, the patient or his friends may be forced to make a bargain beforehand, and the physician has to chaffer in a manner not agreeable to him nor advantageous to his dignity.

The general custom of the profession in a given community may be arrived at, but it is no sort of

guide for particular instances. More frequently, however, the doctor receives less rather than more than a fair average return for his labor.

While we regret the decadence of the fee-bill, we recognize it as a necessary loss in populous and active centres. It may survive in rural and stationary populations, but it cannot be resuscitated in the great cities. There the "personal equation" comes into the sum too much to allow it to be represented by any fixed figures. The fee-bill is a reminiscence, which belongs no longer to the present day.

AN APPEAL TO THE PROFESSION.

Last month a circular letter was sent to a number of physicians in this city, and a second of similar tenor, to the county medical societies of this State, asking contributions to a fund to recompense Dr. William S. Forbes for the expenses incurred in defending himself in a suit brought against him last winter. The circular explains the whole matter, as follows:

It is generally known to the profession throughout the State of Pennsylvania that Dr. William S. Forbes, while in the discharge of his official duties as Demonstrator of Anatomy in the Jefferson Medical College, was subjected to a very unjust and expensive suit at law, under the charge of having violated a private cemetery for the purpose of procuring dissecting material. The result of the prosecution was his complete vindication.

Independently of the personal annoyance and the professional damage sustained, in consequence of the groundless indictment, Dr. Forbes was compelled to incur, in defending his character, heavy expenses, amounting to nearly four thousand dollars. As the suit was instituted while he was acting, not in the capacity of a private teacher, but in the interest and service of a public institution and of the profession in general, it seems unfair that he should be compelled to bear this burden alone. It has been suggested by several members of the medical profession that some measures should be adopted to indemnify Dr. Forbes against the pecuniary loss sustained.

To effect this object, it has been thought best to appeal to the different County Societies of the State, soliciting their co-operation in this matter. If these Societies, or their individual members, acting in concert with the profession of Philadelphia, will contribute to the general fund such amounts as they may see proper, it is probable that Dr. Forbes can be reimbursed. It is hoped that a very general subscription, of even small amounts, will testify to the feelings of the profession in this matter.

If this project meets your approbation, kindly give it your support in your County Society, where we hope the subject will be presented at an early date.

Contributions may be sent to either of the undersigned:

DR. D. HAYES AGNEW, 1611 Chestnut St.,
DR. RICHARD J. LEVIS, 1601 Walnut St.,
Committee.
DR. J. WILLIAM WHITE, 222 S. 16th St.,
Treasurer.

This appeal to the profession will, we hope, meet a prompt and satisfactory response. To allow Dr. Forbes to bear this burden alone would be most unjust. As we took occasion to point out at the time, his action throughout the whole history of the occurrence was not only correct, but praiseworthy; and when a false sentiment based on false information pushed the charge to a decision in open court, it was in his favor, and vindicated him completely.

There is another aspect of the case to which we then alluded, and which also cannot fail to suggest itself to the reader of the above circular. It will be observed that Dr. Forbes incurred this unfounded charge and sacrificed a large sum in defending himself against it, "not in the capacity of a private teacher, but in the interest and service *of a public institution.*"

Why has not that "public institution" paid this bill of costs? Is it poor? No; it is wealthy, probably having the largest income of any medical college in America.

Do the names of any of its officers appear on this appeal for the sum needed to protect one of its own instructors? Not one.

It may easily be guessed that there is a history beneath this action. Let not the position which belongs to them prejudice the cause which is here brought before the professional public. While primarily the duty of aiding Dr. Forbes rests on the institution to which he was attached, it now rests on the profession to which he belongs, and we ask for it prompt and liberal reception.

DYSPEPSIA A SYMPTOM OF KIDNEY DISEASE.

We desire to call special attention to the extract from a lecture by Dr. Da Costa, published on another page, because what it teaches is most important, and is well worthy of being carefully stored up in the mind, and kept before us in our daily work.

Derangements of digestion are very common in all organic diseases, but it seems that they are particularly liable to be present in the various forms of kidney disease, grouped together and generally known as "Bright's Disease."

We have known many cases that have lasted, no doubt, for years, and in which the only symptom that presented itself to the attention of the patient up to within a very short time of a fatal termination, was an obstinate "dyspepsia," that no drugs nor precautions in eating, nor hygienic measures of any kind, no matter how conscientiously carried out, could relieve. Whether the prolonged faulty digestion and consequent assimilation of imperfectly prepared nourishment has caused the changes in the kidney tissue, or whether the impaired action of the kidneys and the consequent retention of excrementitious matter in the system has caused the dyspepsia, or in other words, the relationship of cause and effect between the dyspepsia and the kidney disease, we do not know, and neither is it of much practical importance that we should know. One theory that has been advanced as to the etiology of Bright's disease, holds that owing to faulty preparation the blood albumen is really unfit to remain in the blood, it is excrementitious and must be removed, and that the irritation caused to the kidneys in performing this work, results in an inflammation and degeneration of their structure. If this be true, then we might reasonably suspect that the dyspepsia may act as a cause. But for our practical purposes, we say again, it makes no difference which is the cause and which the effect.

The point that we wish to make is that dyspepsia is frequently the only symptom or sign of chronic Bright's disease that makes itself manifest to the patient, and that when we are called upon to treat a case of chronic dyspepsia, which baffles our skill and resists the treatment that *ought* to cure it, it will be in order to make a careful examination of the urine. It will unravel many a mysterious case, and help us much in our treatment.

METHODS OF STUDY OF INEBRIETY.

In spite of the enormous amount of discussion about temperance and intemperance, there is a sad lack of solid knowledge as to the causes and effects of inebriety. There has been too much sentiment, and too little cold, accurate observation on the matter. An attempt is now commenced by putting a series of questions to physicians, of a kind to elicit the information requisite to get at the truth.

These inquiries are put by the American Association for the Cure of Inebriates, which was organized in 1870 for the purpose of studying the nature and causes of inebriety from a purely scientific standpoint.

The purpose of these questions is to gather the practical experience and observation of leading members of the medical profession, as a basis for a more accurate knowledge of the nature and character of inebriety.

We believe our readers will be glad to see what they are. They run as follows:

What particular mental and physical changes have you noticed concerning the character and general health of the inebriate, that would suggest the idea of disease and the need of physical care and treatment?

Have you noticed any form or condition of inebriety that seems to be produced or is largely influenced by the kind of alcoholic drink used, or the work engaged in, or the food or climate, or any other unsanitary surroundings?

Can you give any facts from observation, bearing on the heredity of inebriety; particularly as to the presence of insanity, epilepsy, phthisis, inebriety, or other neuroses in the parents or relatives of inebriates?

Give cases with histories, if possible.

Have you seen any cases in which insanity or epilepsy either preceded or followed inebriety? If so, was it traced to the use of alcohol alone, or was it due in part, or in whole, to some inherited or acquired diathesis?

Can you give any history of inebriates whose drinking dated from or was influenced by head injuries, sunstroke, syphilis; or could be traced to mental shock, disease or injury of any kind; also to over-work, nervous exhaustion, anæmia, and any specific causes which broke down or injured the system?

Have you noted any distinction between the different

forms of inebriety, such as irregular, continuous, or periodical inebriety? State any facts you have noticed which relate to the periods and forms of drinking.

Illustrative cases concerning any of these inquiries will be welcome, and a full expression of opinion from observation and experience is urgently requested.

The Secretary of the committee, to whom answers should be addressed, is Dr. T. D. Crothers, Hartford, Conn.

It will be seen that the investigation is directed to the classification of the varieties of inebriety; and that the etiology of the condition is to be studied from other points of view from those heretofore received. The necessity of this is obvious. Even among the better educated of the medical profession there remain some who are unwilling to look upon inebriety as a disease, but persist in regarding it as a crime, to be treated rather by religious measures than by therapeutic agents.

We have little doubt but that the many questions relating to intemperance will be considered in a more efficient manner by such investigations as the above.

ANTI-VIVISECTION.

It is with regret that we have to chronicle the appearance of the anti-vivisection fanaticism in our midst.

A meeting was recently held in this city for the purpose of arousing the interest of the public in the question, and to our surprise it was attended by physicians who made speeches in behalf of the movement.

Tenderness toward the brute creation, sympathy with suffering animals, and a desire to prevent the unnecessary infliction of pain, is a sentiment well worthy of the heart of man, and one that is deeply implanted in the being of every gentleman. But to any one who realizes how absolutely necessary to the progress of medical science is the practice of vivisection, it seems almost inconceivable that any one would wish to prohibit it.

We fully agree with those who would restrict its use within certain limits, limits that would insure the saving of ten thousand pains to humanity for every single pain inflicted on a lower animal; as, for instance, requiring a certain authority, as a license to practice vivisection, procurable (without expense) only by those who can furnish satisfactory evidence that their physiological studies have progressed sufficiently far to make it reasonably sure that the results of their experiments on animals will redound to the good of mankind.

Without going into details, let us ask ourselves how much we would know about physiology today were it not for vivisection; and let the answer that must come to the mind of every unbiased person serve as his argument against and condemnation of the anti-vivisection excitement.

To prohibit the inevitable is only to make it still more inevitable, if possible. That the ardent student of physiology *will* experiment upon the lower animals, is just as certain as that the ardent lover of alcohol *will* drink whisky, prohibit it as much as you choose. Therefore, let these well-meaning persons avoid putting a premium upon lawlessness, by endeavoring to prohibit that which *will* be done in spite of all prohibition.

NOTES AND COMMENTS.

Sudden Death after Quinine.

Especially in cases of typhoid fever, it has often been contended that large doses of quinine are responsible for sudden deaths in that disease, when administered to a typhoid patient with a weak heart. This observation was originally made by Hardy. Laborde (Schmidt, Jahrb. 28, 1883,) has investigated the effect of quinia on the heart to determine the truth of Hardy's assertion He found that large doses of quinine may cause cessation of the action of the heart in a double manner: by hyper-irritation (hyperexcitation inhibitoire), or by functional exhaustion in consequence of the ataxic phenomena or the arrythmy and of asystoly.

L.'s experiments, which have been instituted with great care, excluding every possible error, seem to prove, indeed, that there is a connection between the sudden deaths in typhoid and other low fevers, by heart or respiratory syncope, and large doses of quinine. The effect may be produced in a double manner, either by the heart itself being suffering (as usually is the case in these fevers), or by affection of the kidneys, when, in consequence of dimished excretory power of the

latter the excretion of the quinine is retarded, and its dangerous effect upon the heart is increased thereby.

What has been said of quinine, has reference also to cinchonin, only, that in this case the primary spasmodic effect of the latter influences the function of the heart in such a way as to increase the ataxic disturbances and the tetanizing effect to their maximum, without calculating the grave disturbances in connection therewith, which generally cause a mechanical, mostly fatal, asphyxia. The administration of cinchonin instead of quinine, or the adulteration of the latter by the former (in Paris hospitals such has been discovered up to 40 p. c.), is by no means indifferent.

Apropos of these investigations, L. draws the attention to another, yet more dangerous, adulteration of quinine, viz., that with cinchonamin, an alkaloid which differs from cinchonin by being composed of two atoms more water, and by being very much cheaper, and which is found in combination with cinchonin (never with quinine nor cinchonoidin), especially in the remija purdiana. Into a fat rabbit a hypodermic injection was made of four grains of sulphate of cinchonamin. As if struck by lightning, the animal dropped on its side, stretched once its legs, and was dead; while after an injection of the same quantity of cinchonin death would not have taken place under less than one hour and a half, and then under symptoms of violent epileptiform convulsions.

Certainly this fact proves the great difference in the effect of these alkaloids. It is the old story. Some authors report never to have met with fatal cases in the application of certain drugs; others, equally trustworthy, insist upon their having done so. It would seem almost as if in such cases we may safely say, that the first, perchance, had procured a pure, the last an adulterated drug. It is another lesson for us to be careful of whom we buy our remedies, and never to endeavor to buy the cheapest, but always the best and purest article. To be sure, a chemical analysis will detect the swindle: but this discovery is sometimes exceedingly difficult for the expert chemist; how much more—aside from the inconvenience—must it be for the practicing physician, who cannot be *master* of a sister science.

Nerve-Stretching in Locomotor Ataxia.

Prof. W. Stokes, of Dublin, has resorted to this procedure in two cases with rather satisfactory results. In the first case the success was sufficiently encouraging. The operation was followed by the restoration of plantar sensibility, by marked diminution both in frequency and intensity of the shooting pains, and by temporary relief from vesical irritability. There was no return, however, of the patellar reflex, no improvement in locomotive power, and no change in the muscular incoördination. The force employed was estimated roughly at about eight or ten pounds. Antiseptics were used, and the wound, though slow in healing, was always aseptic. In the second case both sciatic nerves were stretched, and very marked and abiding were the beneficial effects, although "severe constant pains at the situation of the operation, accompanied by spasmodic contraction of the muscles of the leg, were complained of by the patient for some hours after the operation." The lightning pains were absolutely abolished; there was temporary increase of power in the legs, and the urinary troubles were abated. Professor Stokes remarks that the *rationale* of the treatment remains as yet unexplained, although he admits a possible solution of the problem based on the observations of Drs. Brown-Séquard and Bastian, that the operation produces "a certain amount of vaso-motor paralysis resulting in vascularity and increased temperature, and that these may lead to improved nutrition of the affected part." Professor Stokes differs from Mr. Marshall as to the advisability of using a dynamometer to estimate the force exerted, since he has decided to employ it in future operations. Professor Stokes' experience leads him to the conclusion that a force of ten pounds is sufficient for the sciatic nerve. Mr. Marshall thinks one of thirty pounds is a very safe one. Both assert eighty-eight pounds, the maximum fixed by M. Artant, to be replete with danger.

Iodide of Potassium an Anti-Galactagogue.

In the *Brit. Med. Jour.*, January 5, 1884, Dr. I. Jenner Verrall writes: "In a recent case of excessive secretion of milk after weaning, I have found the above drug of great service. The child had been weaned more than a week, and the breasts were very large, hard, and tender. Belladonna and aconite, applied freely, together and singly, had failed; this, although combined with firm compression of the breasts by a bandage, and the administration of salines and purgatives—a form of treatment generally successful. Ten grains of iodide of potassium were taken three times a day, and decided relief was obtained after the fourth dose. In all, 160 grains were taken, and then all trace of swelling had disappeared. With each dose I gave half a grain of quinine, as I always do when giving the iodide in rather large

doses. There was no symptom of iodism. Before taking the drug internally, my patient had used the iodide and soap liniment for two days without much benefit, and continued to use it till treatment ceased.

"As long ago as 1858, Roussel, and, in 1861, Delmas, recommended the iodide, and were supported by Dr. Morris, of Cheltenham, in 1864. Dr. Dolan, however, in the *Practitioner* of 1881, quotes Dr. Morris, but reports that the drug, given by himself in larger doses than Dr. Morris had used—namely, fifteen grains against a drachm—had produced no effect. At the time of my case, I had not seen these papers, and was led to use the iodide solely on account of its known action on glandular tissues. I could find no mention of it in Ringer, Woods, Bartholow, or Phillips."

Salicylic Acid a Cure for Tic Douloureux.

We frequently meet in our practice cases of tic douloureux, that often so exceedingly painful neuralgia of the fifth nerve, where an operation seems to promise the only radical cure. If we hear of a remedy which is said to have the same effect as the surgical interference, we become doubtful; but if no less reliable an authority than Prof. Nussbaum (*Munich, Ærztl. Intelligzbl.*, 38, 1883,) assures us of the fact, our hope increases. Recently a number of such cases had been sent to N. for the purpose of having the operation performed, and after a number of carefully instituted experiments, this great surgeon recommends a trial with salicylic acid before proceeding to stretching or to resection of the nerve. In all the recently-sent cases he first tried this remedy, and he found it in every one a radical cure; not only a palliative effect, but really an utter disappearance of the painful disease was the result in every case. Especially in cases of rheumatic nature, N. is positive of having discovered in salicylic acid a specific for tic douloureux. He administered the drug in the following manner:

℞. Acidi salicylici, 0.2,	gr. 3½.
Sodii salicylatis, 2.0,	gr. 32.
M. ft. pulv.	

Within 24 hours the patient takes from 4 to 6 of such powders.

Pulverized Vaccine Matter.

An important discovery by Dr. Reissner promises to do away with all scarcity of vaccine matter in the future. It offers few difficulties, and every country physician can provide himself with a practically unlimited quantity of the purest animal vaccine virus, at a nominal expense.

A calf is vaccinated with pure virus, and after five full days, the pustules are taken off with a pair of forceps, and shaved with a lancet and pressed so as to obtain all the fluid lymph contained. This lymph is spread on glass plates and placed in a sulphuric-acid exsiccator, where it remains one or two days. It is then taken out, pulverized in a mortar, and replaced in the exsiccator till wanted, when it is mixed with a little water or glycerine.

Thus prepared, the virus from one calf will vaccinate 2,000 to 3,000 persons. The calf is as well as ever in a few days, and the physician is provided with the purest of bovine virus for an indefinite period.

The National Board of Health.

Our contemporary, the Boston *Medical and Surgical Journal*, is hard on this respectable but prematurely exhausted body. It says:

"In any other country than the United States, the resignation of its members would have been placed in the President's hands. * * * * Thirty pages out of the one hundred and two of the report before us [are] devoted to the old quarrel with the Louisiana Board of Health, and which probably few people are interested to hear now."

The *Journal* advises the National Board of Health to confine their energies to internal matters, and to work in harmony with the Marine Hospital Service, who may be given the quarantine. They have, however, a field for themselves in the study of statistics and the abstract branches of medical science, as we pointed out a year ago. These would return better fruit than quarrels about precedence.

Mullein Leaves in Phthisis.

A correspondent of long experience in the profession writes us:

"Having seen the mullein referred to as a remedy for phthisis, I am led to tell you that I first saw the remedy suggested in the M. AND S. REPORTER about 1855, to be smoked in a pipe. At that time I was a young practitioner in Sussex county, Del., and the wife of the landlord with whom I boarded belonging to a family of consumptives, and having repeated attacks of catarrh with profuse expectoration, was thought to be in great danger of the disease. She was then about 35 years old, and quite a smoker. I recommended her to get mullein and dry it, and mix it with her tobacco for smoking. From this she derived great benefit, and kept up the practice for many years. Her death occurred some years since, but I do not

know the cause. I have recommended the use of the mullein to many others, but I have never known it followed up so well as in the case of the lady mentioned. I feel sure that her life was prolonged by its use."

Sulphuric Ether as an Anæsthetic.

No other anæsthetic than sulphuric ether is used in the hospitals of Naples, Lyons, and Geneva. Dr. J. R. Comte, of the last-named city, has recently published some facts gathered from the three named.

The ether must never exceed a specific gravity of 0.725 at 15° C., and must have no acid reaction and no trace of fusel oils.

With such, 100 cubic cent. will produce anæsthesia in an average of six minutes. The ether must be inhaled in full doses and concentrated. The pulse rises to 110–140 per minute. The temperature invariably falls, the urine diminishes in quantity and falls in specific gravity. Small injections of morphia are occasionally beneficial to control excitation. Nothing special is recommended against the vomiting.

Intestinal Worms a Cause of Invagination.

From the *Rev. Med.* we learn that in a number of autopsies practiced upon animals dying with symptoms of intestinal occlusion, M. Mégnin found in a certain number that the obstruction was due to intussusception. In nearly all these cases he found a large number of ascarides in the intestine, and thought that the irritation caused by their presence had induced such energetic peristaltic movements as to force a portion of the small intestine through the cæcal valve. The usually accepted causes of invagination are defective hygiene and enteritis, and it is probable that the intussusception in these cases was referable to an enteritis set up by the presence of large quantities of the lumbricoids, rather than to simple irritation.

The Influence of Spices on Digestion.

Hasson has been making some experiments on this question, which he publishes in the *Wiener Med. Blät.* He has carried out his experiments with artificial gastric juice, in which he has placed meat which had lain for four days in wine, vinegar, oil, charcoal, and common salt respectively. The meat which had been immersed in white wine dissolved the most rapidly, that in vinegar, oil, and charcoal just as quickly as fresh meat, while the salt meat was much more difficult to dissolve. He then experimented on the influence of salt, and found that small quantities hastened digestion, but that a larger amount retarded it. Acetic acid seemed to hasten digestion in exact proportion to the dose.

Relations of Menstruation to Ovulation.

The recent researches on this subject by Prof. Leopold (in the *Archiv für Gynækologie*) result in showing that ovulation may take place without menstruation. In fact, the latter does not directly depend on the former, but only indirectly. The immediate exciting cause of the congestion which leads to the menstrual flow is not the expulsion of the ovum, but the formation of new cells in the ovary, which leads to a general congestion of the genital tract and may or may not result in the ripening of an ovule. Prof. Leopold, however, acknowledges that the facts obtained are not sufficient to establish a positive theory.

Helenin as an Expectorant.

A late issue of *El Siglo Medico* contains an article by Dr. F. Valenzuela, urging the value of helenin in bronchitis (chronic), broncho-pneumonia, and tuberculosis, for controlling the cough and facilitating expectoration. In whooping-cough he has also found it "surprisingly efficient." It is not a narcotic, and both appetite and digestion improve under its use. The dose he gives is five drops of the tincture three times a day—but he neglects to add the strength of the tincture employed.

Nervous Dyspepsia.

We had recently occasion to say a few words about this condition, and it affords us pleasure now to note that Gallerani (*Rivista Clinica*) has had some experience with a similar condition. In his case the trouble was of two years' duration, and he cured it with belladonna. He gave two-fifths of a grain of extract of belladonna divided into two doses, one to be taken an hour before luncheon, and the other an hour before dinner, during the first three days of treatment. This dose was increased to three-fifths of a grain daily during the last four days.

Digitalis in Dropsy from Heart Failure.

Two cases reported in the *Canada Med. and Surg. Jour.*, January, 1884, afford excellent examples of the good results to be obtained from digitalis in the dropsy of heart-failure. In the first case, the man's condition was desperate. On three several occasions he was rescued from a state of extreme danger and great suffering by prompt treatment,

and was restored for a considerable time to comparative comfort and activity. The autopsy showed absence of any disease of the valve curtains, but great enlargement of the auriculo-ventricular opening. One drachm of infusion of digitalis with bitartrate of potash and spirits of chloroform were given thrice daily.

Water Dressings for Wounds.

Listerism means cleanliness; hence, when Dr. J. J. Larkin gives a thrust at Listerism in the *Ft. Wayne Jour. Med. Sci.* for January 1884, delicate though it is, and then goes on to describe his cold water dressing, it seems rather paradoxical, since his recommendation really embodies Listerism, because it advocates cleanliness. He has had most satisfactory results in incised wounds and amputations, with dressings of cold water with *one-half per cent. of carbolic acid.* Cold contracts the blood and absorbent vessels, prevents swelling and pain, and consequently inflammatory actions; water soothes, cleanses and facilitates drainage; rest is the only condition remaining to complete the best plan for recovery.

Fatal Traction on the Umbilical Cord.

In view of the case reported to the *Med. Record* by Dr. George Huntington, it will be well to give the stern injunction, "Hands off," to the army of officious and meddlesome women who are always on hand at a country accouchement. He was called to a woman in labor, and when he arrived found her dead. The child had been delivered spontaneously, and some fussy woman had pulled on the cord until she had inverted the uterus, and the woman died from hemorrhage.

Electricity for Ovarian Pain.

From the *Rev. de Therap.*, we learn that Mr. Apostoli makes use of a faradic stream of high tension, applied to the uterus, either by means of a double uterine electrode, or of an electrode pushed into the vagina, the other being placed on the hypogastrium. The stream must never be powerful enough to excite pain; the sittings must generally be repeated daily, and last about ten minutes.

A Cause of Blindness.

In the course of an article in the *Am. Practitioner* for January 1884, Dr. E. Williams says that in endocarditis or arteritis, and in women exhausted by puerperal hemorrhage, a coagulum may drift into the main artery of the retina and cause instantaneous blindness. Recovery of sight after such accident is almost impossible.

Carbonic Acid in Whooping Cough.

Inhalations of carbonic acid are recommended by several authorities in the *Rev. de Therap.*, December 15, 1883. It is obtained from an apparatus for making Seltzer water, and was slowly inhaled through a long rubber tube placed at the nasal orifices.

News and Miscellany.

New York State Medical Society.

The seventy-eighth annual meeting of this Society was held in Albany February 5, 6, and 7. The Inaugural Address was delivered by the President, Dr. Alexander Hutchins, of Brooklyn. Dr. Wesley M. Carpenter read a very interesting biographical sketch of Dr. J. Marion Sims, after which Dr. J. P. Creveling, of Auburn, read a short paper on "Double Hare Lip." The following papers then followed: "Two Unusual Cases in Obstetrical Practice," by Dr. W. C. Wey, of Elmira; "Prophylaxis of Summer Complaint in Infants," by Dr. David Little, of Rochester; "Neuber's Deep Canalization in Amputation of the Female Breast," by Dr. A. G. Gerster; "An Operation for Correcting Deformity of the Auricle," by Dr. O. D. Pomeroy, of New York; "Poisoning by Potassium Chlorate," by Dr. George B. Fowler; "The Establishment of Hospitals in Small Cities," by Dr. Parker, of Poughkeepsie; "A New Method of Partial Extirpation of the Cancerous Uterus," by Dr. Van de Warker, of Syracuse; "The Value of Electricity in Diagnosis," by Dr. L. E. Felton, of Potsdam; "Congenital Lipoma." by Dr. A. Jacobi; "Orbital Cellulitis," by Dr. T. R. Poolep; "A Plea for the Pharmacopœia," by Dr. Laurence Johnson; "Operations for Closure of the Hard and Soft Palate," by Dr. Vanderveer, of Albany; "Sympathetic Ophthalmia," by Dr. David Webster, of New York; "The Value of Horse-hair as a Means of Drainage," by Dr. Daniel Lewis; "Dysmenorrhœa, its Treatment by Dilatation," by Dr. W. W. Potter, of Buffalo; "Two Cases of Rupture of the Heart, with Pathological Specimens," by Dr. T. H. Squire, of Elmira; "Biographical Sketch of James Rushmore Wood, M. D., LL. D.," by Dr. Frederick S. Dennis; "Biographical Sketch of the late Dr. G. W. Bradford," by Dr. E. C. Green, of Homer; "Biographical Sketch of the late Dr. J. F. Jenkins," by Dr. G. J. Fisher, of Sing Sing; "The Medical Society of the State of New York in its Relation to Science," by Dr. E. Harris, of Albany; "Biographical Sketch of Dr. Jas. S. Bailey," by Dr. F. C. Curtis, of Albany; "House Sanitation, as It Is and as It Should Be,", by Dr. W. F. Sheehan, of Rochester; "The Mechanical Treatment of Hip-joint Disease," by Dr. Milton J. Roberts, of New York; "Synovitis of the Knee and Ankle Joints," by Dr. A. M. Phelps, of Chateaugay; "Morbid Drowsiness and Somnolence," by Dr. C. L. Dana, of New York; "The

Management of Face Presentations," by Dr. E. L. Partridge, of New York, "Arsenic and Digitalis in Phthisis," by Dr. A. Jacobi, of New York; "Two Cases of Poisoning by Tansy," by Dr. W. Woodward, of Big Flats; "Sympathetic Serous Iritis," by Dr. Webster, of New York; "Forster's Method of Ripening Cataract," by Dr. Mittendorf; "Spontaneous Pyæmia," by Dr. J. B. Todd, of Parish; "Care and Preservation of Medical Pamphlets," by Dr. J. G. Fisher, of Sing Sing; "Strangulated Hernia, Five Cases Treated by Operation," by Dr. J. Chapman, of Medina; "Notes on the Treatment of Diseases of the Digestive Organs," by Dr. F. A. Castle, of New York; "Hay Fever," by Dr. J. O. Roe, of Rochester; "The Cure of Spinal Caries without Deformity," by Dr. M. Josiah Roberts, of New York.

After some discusssion, the question of repealing the new code and going back to the code of the American Medical Association was put to vote, which resulted in 105 in favor of the repeal and 125 against it; thus dooming the New York State Society to another year of professional ostracism.

Dr. A. Jacobi, of New York, offered a resolution calling the attention of Congress to the importance of the speedy passage of the bill providing for the erection of a fire-proof building for the medical department of the army. The resolution was adopted, and it was ordered that it should be sent to the proper committee, attested by the seal of the Society and the signatures of the President and Secretary.

The Committee on Prize Essays reported that there had been two essays submitted:

1. "Tuberculosis of the Breast," by Dr. Ghislani Durant, of New York, for which the Cash Prize was awarded.

2. "Consumption," which was thought worthy of publication.

Dr. Powers, of Ontario, Canada, made some remarks in regard to an Act regulating the practice of medicine, recently passed in Ontario. The Act requires an examination previous to matriculation, four years of study at a medical college, and the examination by a board independent of all teaching bodies. No degree from any part of the world will license a person to practice in Ontario.

Dr. Jacobi, of New York, from the Committee to Coöperate with the Society for the Prevention of Cruelty to Children, reported that a hospital for diphtheria and scarlet fever had been organized in New York, and would soon be ready for occupation. The committee offered the following resolution, which was adopted:

Resolved, That the State Medical Society deeply regrets the failure of the Legislature last year to enact the law proposed by its committee for the protection of children engaged in factory work, and respectfully commends the subject to the attention of the present Legislature, with the hope that definite action will be had in the matter, which is of grave importance and deep interest to all humane persons.

The Nominating Committee then presented the following report, which was adopted:

President.—Dr. B. F. Sherman, of Ogdensburgh.
Secretary.—Dr. William M. Smith, of Syracuse.
Treasurer.—Dr. Charles H. Porter, of Albany.
Censors.—Southern District: Drs. F. A. Castle, Geo. H. Fox, D. Webster. *Eastern District:* Drs. E. D. Fergusson, N. L. Snow, LeRoy McLean. *Middle District:* Drs. A. Churchill, J. K. Chamberlayne, Frazer. *Western District:* Drs. T. F. Rochester, B. L. Hovey, T. Dimon.

Committee on Ethics.—Drs. A. Jacobi, A. Matthewson, C. E. Whitbeck.

Honorary Member.—Dr. William G. Bronson, of Connecticut.

Adjourned.

The Veterinary Department of the University of Pennsylvania.

This new department is now organized. The faculty includes William Pepper, M. D., LL. D., Provost of the University and *ex-officio* President; Rush Shippen Huidekoper, M. D., V. S., Dean, Professor of Internal Pathology, and *pro tempore* Professor of Veterinary Anatomy; James Tyson, M. D., Professor of General Pathology and Morbid Anatomy; Horatio C. Wood, M. D., LL. D., Professor of Materia Medica, Pharmacy, and General Therapeutics; Theodore G. Wormley, M. D., LL. D., Professor of Chemistry and Toxicology; Harrison Allen, M. D., Professor of Physiology; Joseph T. Rothrock, M. D., B. S., Professor of Botany; Andrew J. Parker, M. D., Ph. D., Professor of Comparative Anatomy and Zoölogy; Robert Meade Smith, M. D., Professor of Comparative Physiology; —— ——, Professor of Surgical Pathology and Obstetrics; Adolph W. Miller, M. D., Ph. D., Demonstrator of Pharmacy; Henry F. Formad, M. D., B. S., Demonstrator of Pathology and Morbid Anatomy.

The course of study extends over three years, the year beginning on October 1 and ending on June 15. The requirements for admission to this Department are the same as for the Department of Medicine. The studies are for—

First Year.—Chemistry, Materia Medica and Pharmacy, Physiology, Histology, Botany, Zoölogy, Veterinary Anatomy, and Forging.

Second Year.—Medical Chemistry, Physiology, Therapeutics, General Pathology and Morbid Anatomy, Veterinary Anatomy, Surgical Pathology, Internal Pathology and the Contagious Diseases, Botany, and Zoölogy.

Third Year.—Therapeutics, General Pathology and Morbid Anatomy, Surgical Pathology and Operative Surgery, Internal Pathology and the Contagious Diseases, Sanitary Police, Obstetrics, and Zoötechnics.

In the second year the student will attend clinics, and will serve as aid in the hospital; in the third year, he will be placed in charge of sick animals, and be required to prepare clinical reports and make autopsies. He will also make regular visits to breeding and dairy farms and to slaughter-houses, in order to familiarize himself with the races of animals, the economical means employed in their care, and the varieties of butcher meat.

Examinations will be held at the close of each year and at the end of the course. All these examinations must be passed satisfactorily before the student can be registered as a candidate for the degree.

Graduation.—Upon completing satisfactorily the full course of study, the student receives the degree of Veterinary Surgeon (V. S.), upon the

same conditions as those on which the degree of Doctor of Medecine is conferred.

A handsome amphitheatre and large rooms for dissection and laboratory work have been erected, and the stables requisite for hospital use will be finished and occupied before the opening of the department, in September, 1884.

A National Pharmacopœia for the United States.

On January 8, 1884, Mr. Randall presented the following bill to the House of Representatives:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

That the Secretary of the Treasury shall, as soon as practicable, detail two officers of the Marine Hospital Service, and the Secretary of War shall detail two officers of the Medical Staff of the Army, and the Secretary of the Navy shall detail two officers of the Medical Staff of the Navy, for the duty of compiling and preparing a pharmacopœia, which shall be known as the *National Pharmacopœia of the United States of America*, and shall be held and accepted as the standard for the purveying, compounding, and dispensing of drugs or medicinal agents, and shall be taken as authority in the Treasury Department on all questions arising under the tariff laws of the United States with regard to the nomenclature, description, and purity of drugs or remedial agents, and shall further be received as evidence in the United States courts. And the matters contained in the said pharmacopœia shall be free for use by all authors and commentators for the benefit of the medical and pharmaceutical professions and of the community at large; and it shall not be lawful for any one to reprint and publish the said pharmacopœia as a whole.

Sec. 2. That the medical officers detailed as above provided shall invite the American Medical Association and the American Pharmaceutical Association, at their next annual meetings, to form committees of not more than three members from each of the said Associations, which committees, if so appointed, may coöperate with the above-named medical officers in the preparation of the said pharmacopœia, forming a board which shall have power from time to time to add to its number as may in its judgment be necessary, and which shall elect a chairman and secretary, and adopt such rules as it shall see fit for the expediting and perfecting of the said pharmacopœia, which, when completed, shall be printed under the supervision of the said board; and an edition of not less than five thousand copies shall be printed, for use in the several departments of the Government of the United States; and copies may be furnished to private persons in accordance with the provisions of section thirty-eight hundred and nine of the Revised Statutes.

Sec. 3. That for the purpose of defraying the necessary expenses of preparing the said pharmacopœia, the sum of five thousand dollars is hereby appropriated out of any moneys in the treasury not otherwise appropriated, and the same shall be disbursed under regulations to be prescribed by the Secretary of the Treasury.

Sec. 4. That the said pharmacopœia shall be revised once in ten years, upon the plan embodied in this Act.

Pharmaceutical Notes.

Jensen's Crystal Pepsin.

The knowledge of the value of this variety of pepsin is rapidly extending. Recently the United States Marine Hospital Service has ordered three kilos of it at once, to be put up in 2.5 gramme bottles. Dr. Jensen has devoted many years of close attention to perfecting his product, and it now stands with the very first in its line.

Nitrogenized Iron.

This ferruginous product, prepared by Chapman, Green & Co., Chicago, ranks as one of the best of chalybeates. It is palatable and efficient.

Bromidia and Papaine.

The pharmaceutical preparations of Battle & Co., of St. Louis, are in no sense secret preparations. The full formulæ are open to the profession. Their claim to favor rests on the exceptional purity of the constituents employed, uniformity in composition, agreeable flavor, and judicious proportion. We have been using for some time the two above-named, and they evidence the justice of these claims.

The Philadelphia Clinical Society.

The Northern Medical Association of Philadelphia reorganized at the College of Physicians on the evening of January 26th, as the Philadelphia Clinical Society. A large number of new members were enrolled, and the following officers elected for the ensuing year:

President—Henry Beates, Jr.
First Vice President—E. E. Montgomery.
Second Vice President—Hannah T. Croasdale.
Corresponding Secretary—J. E. Richardson.
Recording Secretary—J. G. Heilman.
Reporting Secretary—G. Betton Massey.
Treasurer—L. Brewer Hall.
Censors—A. S. Barton, S. N. Troth, Albert H. Smith, James B. Walker, and Henry Rihl.

To Prevent Horses from Slipping.

From the *Med. Press* we learn that Mr. C. C. Baird, of the Dick Veterinary College, Edinburgh, has invented an india-rubber frog-pad for fitting into the heels of the shoes of horses, with the view of preventing the animals from slipping and falling. The invention is exceedingly simple, and will be of great value to medical men and others who drive horses, especially on asphalt, and in frosty weather. The pad can be removed in the evening and replaced in the morning. A set of pads is expected to wear out two sets of shoes. The trial of the invention has fully borne out the statements of the inventor as to the merits of the apparatus.

A New Medical Society in New York State.

On February 6, a meeting of the adherents of the National Code of Ethics was held in Albany, and the New York State Medical Association was organized. The following officers were elected:

President—H. D. Didama, M. D., of Syracuse.
Secretary—E. D. Fergusson, M. D., of Troy.
Treasurer—John H. Hinton, M. D., of New York.

Dr. Austin Flint, Jr., proposed New York as the next place of meeting, which was adopted. It was resolved that the time of meeting should be the third Tuesday of November.

American Pork in France.

The French Academy of Medicine, in reply to the questions propounded by the Minister of Commerce, relative to the importation of pork, says: First, that the symptoms of typhoid trichinosis are so dissimilar from all others that they never can be mistaken, and second, that the importation of foreign salt pork may be fearlessly authorized by the French Government, as it has been clearly proved that no danger to the public health has been caused by such importation.

Sacrificed to Duty.

From a foreign exchange we learn that Dr. G. A. Popow, one of the assistant physicians of Prince Peter von Oldenburg's Children's Hospital, while engaged in examining the throat of a bad case of diphtheria, received on his lips and face some of the secretions from the child's mouth. In spite of the most careful cleansing, he was seized next day with shivering and the first symptoms of an attack of diphtheria, which within five days proved fatal.

The Sewer System of Denver.

Colorado, and Denver (as its chief city), has become so much of a health resort that it has become very essential that its sanitary arrangements should be well looked after. The difficulty about its water supply has been overcome by the boring of artesian wells, which furnish an abundant supply of most wholesome water, and we are pleased to learn from the *Denver Medical Times* that a most efficient system of sewerage has been introduced.

A Ventilated Quilt.

The *Lancet*, December 29, 1883, tells us that a Mr. Pocknell has invented some kind of a ventilated quilt, that, while it preserves the warmth of the body, yet allows of ventilation. Our authority does not seem to have a very definite idea of the nature of this invention, but believes that "it consists in a system of perforations which are filled in with some substance that allows the vapor to escape."

Items.

—Leprosy and elephantiasis are common and widespread throughout Mexico.

—Dr. J. Morrison, of the *Nautical Almanac* office, Washington, D. C., has been elected a Fellow of the Royal Astronomical Society of London, England.

—Dr. Frank H. Hamilton's work on *Fractures and Dislocations* has recently had a sixth revision and translation into French at the hands of Dr. G. Poinsot.

—M. Pasteur's Cholera Commission is to be honored by the nomination of two of its members, M. Straus and M. Roux, as chevaliers of the Legion of Honor.

—The Chamber of Commerce of Cincinnati is said to have voted to memorialize Congress to take prompt retaliatory measures in regard to the prohibition of the importation of American pork into France and Germany.

—One of the members of the Louisiana State Board of Health, Dr. Formento, has been nominated a corresponding member of the *Société d' Hygiène Publique*, of Bordeaux.

—The heaviest human brain observed thus far is said to have been that of the Russian poet, Turgeneff, who lately died in Paris. It is reported to have weighed 2,012 grammes.

—Important lesson to all writers, as given by Dr. Billings, U. S. A.: 1. Have something to say. 2. Say it. 3. Stop when you have said it. 4. Give a proper title to what you have said.

—At the recent examinations for *externes* to the Paris hospital, three women physicians passed successfully. There were 254 candidates. Madame Sarrante passed sixth, and Madame Chopin one hundred and forty-second.

—Holmes calls Ricord "the Voltaire of pelvic literature—a skeptic as to the morality of the race in general, who would have submitted Diana to treatment with his specifics, and ordered a course of blue pills for the vestal virgins."

—The abolition of chaplaincies at the Paris hospitals has excited the indignation of the Archbishop of the city, who advises the faithful not to send the sick to the hospitals, but to organize a system whereby they may be treated at home.

—The Senate Committee on Commerce is reported to have acted favorably on an amendment to the shipping bill providing for the abolition of the present system of supporting the marine hospitals by a tax on sailors, and throwing the expense directly on the government.

—It is claimed that many letters went to the Dead-Letter Office because of the inability of color-blind persons to recognize the difference in color between red and green. This is obviated by the law which has just gone into effect, of having but one denomination and a uniform rate of letter-postage.

QUERIES AND REPLIES.

M. D., of Pa.—You will find the full text of the Act to regulate the practice of medicine in Pennsylvania in the MEDICAL AND SURGICAL REPORTER, vol. xliv., p. 502. It will answer the questions you put.

A Correspondent requests those of our readers who have given some special attention to the treatment of asthma to communicate their most satisfactory methods through the columns of this journal. We second his wishes.

Dr. S. W. D., of Va., asks the experience of physicians on the use of carbolic acid, hypodermically, in hemorrhoids. He observes that some writers commend it, while Allingham and others say it is useless. We shall be pleased to publish replies.

Dr. K., of S. C.—We take a special interest in developing our knowledge of indigenous materia medica, and will gladly publish any observations in that line.

DEATHS.

SHRADY.—In New York, January 15, 1884, Jeannie Lockhart, wife of Dr. John Shrady, and daughter of Lucinda and the late Walter Sammis.

SWARTZLANDER.—February 6, 1884, Susan M., wife of Dr. Frank Swartzlander, in the thirty-second year of her age.